

Croydon Public Libraries.

THORNTON HEATH BRANCH.



Class No. 575.....

W.—5,000—22/8/06

12M.S.C.

X12666



LONDON BOROUGH
OF
LEWISHAM

LIBRARY SERVICE

Author _____

Title _____

BOOK STORE

Books or discs must be returned on or before the last date stamped on label or on card in book pocket. Books or discs can be renewed by telephone, letter or **personal** call unless required by another reader. After library hours use the Ansafoe Service (01-698 7347). For hours of opening and charges see notices at the above branch, but note that all lending departments close on Wednesday and all libraries are closed on Sundays, Good Friday, Christmas Day, Bank Holidays and Saturdays prior to Bank Holidays.

287

METROPOLITAN
SPECIAL COLLECTION

HEREDITY, VARIATION AND GENIUS

WITH ESSAY ON
SHAKSPEARE :
"TESTIMONIED IN HIS OWN BRINGINGSFORTH"
AND ADDRESS ON
MEDICINE :
PRESENT AND PROSPECTIVE

BY
HENRY MAUDSLEY, M.D.



London

JOHN BALE, SONS & DANIELSSON, LTD.

OXFORD HOUSE

83-91, GREAT TITCHFIELD STREET, OXFORD ST., W.

1908

575

T12666



HEREDITY, VARIATION AND GENIUS.

I.

EVERYBODY is what he typically is because his progenitors were what they were, like having begotten its like ; he inherits the form, traits and qualities of the stock from which he proceeds. In the molecular structure of the minute germ of him, with its millions of constituent atoms and their ordered mazes of intricate motions, lurked the predispositions or plans of his essential structure, form and qualities : in that little book were all his members written when as yet there were none of them. That is an opinion which, based on the experience of all the world, emerges plainly in such popular sayings as that he comes of a good stock, that eagles do not breed doves, that one cannot gather grapes off thorns or figs off thistles, that what is bred in the bone will out in the flesh, and in the old Hebrew proverb—not quite baseless perhaps although savagely denounced by Isaiah—that when the fathers have eaten sour grapes the children's teeth are set on edge ; wherein lies truly not the broad statement of a general law of heredity only but also a just appre-

2 *Heredity, Variation and Genius*

hension of the predominant part which the quality of the stock plays in the transmission of qualities and the foundation of character. Always a basic fault in the stock is liable or likely to appear in one or another offspring of parents who themselves have shown no sign of it ; the bad streak, Alphæus-like, having gone under for a while to come again to the surface in the stream of descent. No one, be his aims and ambitions, his regrets and resolves, his triumphs and mis-haps what they may, evades the fate of his organization. Happy he then who, looking back on a sound ancestry, can rest in the quiet confidence of a good descent ; in all changes and chances of life it shall stand him in good stead.

Besides the manifest inheritance of physical and mental features of both parents either in the same forms or in various blends and proportions offspring exhibit features not visible in either of them, not even it may be in their known ancestry. Every one has his idiosyncrasy, being essentially himself, not another self, notwithstanding the multitude of selves that are and are likely to be. Diversities do not at first sight seem so natural and necessary as it does for a child to resemble its father or mother. Whence comes the invention which the new feature is ? Somehow from the union of the special qualities of two stocks compositions of germinal elements issuing in organic variations have taken effect. But is that strange at all ? Compositions in organic natures are

more than mere mixtures of matters. As chemical bodies unite to form compounds having properties unlike those of either component, it is not surprising that the vital union of the infinitely complex and numerous constituents of the germinal plasm, containing essentially the qualities of two individuals and their respective stocks—reaching back indeed to the very beginnings of life—should originate variations.* It would be more strange if it were not so. Considering the innumerable varieties of personal features which men and women present, no two faces nor two voices nor two gaits being exactly alike, and reflecting that what is displayed outwardly must, so to speak, have been contained essentially in the innermost of the minute germ, the visible bespeaking that which is invisible, it is plain that there are innate

* The period during which organic life has been evolving on this planet is differently estimated. Most experts agree that it was from 100 to 200 million years, while some assign more than double that time. A German scientist, taking the lowest computation, has in imagination reduced the 100 million years to a day, assigning the proper proportion of hours and minutes to the successive geological periods. According to that estimate the human period would be two minutes, and if the historic period be estimated at 6,000 years it would be five seconds of the imagined day and the Christian period in that case two seconds. All too brief a period, plead Christian apologists, to fulfil its destined function of regenerating mankind, when account is taken of the many million years during which countless millions of the race died unregenerate, unwitting of the transcendent event of its future redemption and powerless to profit by it.

4 *Heredity, Variation and Genius*

germinal differences, predispositions of elements fitted to grow into definite structural characters, and that unlike bodily and mental qualities are as much in the natural order of things as likenesses. And if innate germinal differences, then active elective affinities working in the particular germ-unions as in the particular parental germ-breeders when they fell furiously and fatuously in love—sexual attractions or selections of elements in germs as of mortals in social life.

That variations continually occur in organic combinations and developments is a familiar fact. Sprouting prodigally they mostly perish soon because they are not then put forth in circumstances favourable to their growth; those only thrive and grow which lighting on propitious surroundings meet with conditions suiting them and they suit—that is to say, by what is called natural selection. In such case it is a survival of that which is most fitted to survive in the circumstances, although nowise always a survival of the highest and best, seeing that the circumstances may suit the worst and starve the best. Pliant sycophancy prospers well where manly self-respect would die of inanition, and the apt lie often spreads quickly in civilized communities by natural selection or easy infection when the naked truth, being conventionally indecent, obtains no sustenance and is promptly stifled. Why variations occur so constantly in organic development is not yet explained, unless it be thought explanation enough

to ascribe it to the inherent impulse of protoplasm under suitable stimulation to increase and divide when it can and as adaptively as it can. Scientific enquiry has to concern itself for the present with the *what is* without knowing the *why*. As in the end it must perforce do with the ultimate *why* of things ; for when science has reached its utmost stretch it will not be omniscience, each height of painfully scaled outlook disclosing height towering above height without end. It is the foolish body only, not considering wisely, who aspires to " pierce the veil of the unknown " ; the lifting of one veil evermore discovers another veil and will surely do so to the ending of mortality.

All the laboured learnings of mankind being but modes of self-expression in response to progressive adaptations of experience, the symbolical notations of the classified experiences of limited beings who begin and end, and whose ultimate value consists not in thinking but in being—symbols too made exclusively in terms of the leading senses of sight and touch and of the muscular sense—it is evident that knowledge of the whence and whither of things cannot be obtained by any rational method of enquiry ; not less evident that such revelation by any other method may be just the irrational illusion of human conceit exulting in and interpreting grandly its own creative exercise.* But not therefore un-

* There is notably a singular pleasure in creative or productive work, mental as well as bodily, a sort of transporting

6 *Heredity, Variation and Genius*

profitable illusion during its season of growth and vigour. When mankind cease to create seasonable illusions and to take illusions for realities it may go hard with them in their pilgrimage through time : to them as to the individual mortal when desire fails and hope dies the grasshopper be a burden.

Certain it is that there is in organic nature a strain or *nisus* to a more complex and special becoming of things, a *conatus fiendi* or *progreendi*, which has wrought steadily through the ages and discovers its working alike in the innumerable variational outbursts ; in the countless multitudes of seeds, buds and germs that mostly perish timelessly ; in the now settled types of the various organic species ; in the eager aspirations of human imagination, futile or fruitful. It is as if the mighty stream of organic plasm as it flows slowly onwards in its countless channels from age to age were intent to make new channels on the least occasion and only seldom succeeded. That it seldom succeeds now may be because its upward

creative emotion : the accomplished liar feels it in launching his lies ; the fantastic novelist in the silly and grotesque deformities of an undisciplined imagination ; the soaring metaphysician in the ventosities which he proudly christens entities ; the poet or humbler author who in the zest and fervour of composition is immensely delighted with work which, if he dares to read it over twenty years afterwards looks commonplace, perhaps makes his ears tingle or his cheeks glow—that is to say, if he has had the capacity to grow in insight and judgment as he has grown in years and detachment.

flux is pretty well restricted to the human line of progress, man's dominant ascendancy having made a hostile environment which has stopped natural progress in the lower animals, although not perhaps in all the minutest forms of microbial life which still fight him not unsuccessfully and may conceivably one day be victorious. How can variational shoots of parent stems, such as once grew into different species of living things, take effect now in face of a man-made environment, uniformly adverse, which checks variation and prevents differentiating adaptation? In the animal kingdom it has come practically to this—that the lower animals are reduced to the self-conservative instinct; in man only does the perfective instinct work. He is, so to speak, the supreme branch of the tree of life in which the ascending sap yet stirs active growth, the present and perhaps final culmination of organic development on his planet; which in truth may well be the case, seeing how successfully he has absorbed and exploited all lower organic being and what small likelihood there is of the advent of higher being to absorb and exploit him.

Asking whence this force of organic evolution is derived, the answer is simple enough if the enquirer be content to stay in secondary causes. It is plainly due to the innumerable minute and perpetually beating pulses of the sun's rays upon living protoplasm from its earliest and simplest up to its latest and most complex development;

8 *Heredity, Variation and Genius*

the capital stored in weaker life being seized and consumed by stronger life in progressive carnifications to subserve its maintenance and growth. So and not otherwise has organic composition been urged to higher and higher evolution of life through the ages ; its series of ascents marking progressive embodiments of the sun's radiant energies—its light, its heat, its showers of electrons—in more complex matter and force. Were the sun—"of this great world both eye and soul"—to go out to-night all life would be dead tomorrow, no memory more left of flora and fauna, of kingdoms and empires, of wise men and fools on its sunless satellite. A verily tragic ending of things to behold were any one left to behold it, but not after all really unbefitting the trifles it and its products are in everlastingness. But if very finite and relative creatures, themselves infinitesimally minute fractions of an infinite universe, strain their wits to know the primal origin of things, perforce imagining beginnings and ends just because they begin and end, and ask meaningless questions about the absolute when they are only relative, the infinite when they are only finite, and the eternal when they are only transitory ; vainly craving to comprehend the incomprehensible and to express the ineffable by setting forth how things not finite began, why they go on, and whither they are going ; then there is nothing for it but transcendental metaphysical inanities or ecstatic outpours and reverential pantings forth of mystical

thoughts and feelings : these enrapturing because intensely thrilled with the transport of a vague and vast emotion which may be gloriously interpreted as a transient union or communion with the primal and divine energy from which all things proceed ; those sublimely exalting because fired with the special conceit of a superior faculty of insight into the realities of being which the common mind is destitute of.

Is it true then that there lurks deep in human nature—in the heart rather than in the head—a slumbering instinct of cosmic unity, or, failing that, of organic unity? A reluctance of human pride to share such humbler organic being may be pacified by representing the matter as a sharing in the divinity of nature, inborn love of which omnipresent divinity can then be triumphantly proclaimed to mark the opening of a faculty of insight transcending intellect. If the ultimate inspiration of art, poetry, music, love, religion, so transporting at its best as to be styled divine, be an awakened feeling of a mingling with the universe, a thrill of the infinite not ever to be expressed adequately in terms of the understanding, such inspiration must necessarily be aspiration rather than apprehension, exclamation or cry rather than articulate language, prayer rather than predication. The man lauds, as the bee buzzes and the grasshopper chirps, the divine ; either of which no doubt pictures it, if it picture it at all, in suitable forms of bee-thought or grass-

hopper-thought. Every form of perception or knowledge being sense-derived and sense-conditioned limitation of ultimate reality, which might conceivably be pictured otherwise than in terms of the senses of sight and touch, it is certainly safer, in hope of getting nearer to the ultimate reality of things, to rest on feeling which cannot be formulated. While understanding or reason represents the successive and increasing adaptations to the environment, with careful maintenance of just balance of relations, which the individual offshoot of nature painfully makes in its process of adaptation, feeling can be thus claimed to represent its fundamental root in and union with the nature it issues from and always remains part of ; so that where elemental instincts come into play the domain of intellect can be prescribed to end and the domain of religion to begin. Necessarily a somewhat vague and vacuous region—a spacious feeling of an infinite within as of an infinite without—but for that reason all the more delectable ; for mystical feeling is a pleasing suffusion necessitating no painstaking and tedious labours of acquisition nor scrupulous regard of proportion, and fancy may proudly people with such forms as it pleases.*

* And yet of the actual value of such vague feeling might it not truly perhaps be said as of the value of vain and wandering metaphysical thoughts ?

“ But apt the mind or fancy is to rove

“ Unchecked ; and of her roving is no end,

It might be curious to enquire exactly what is the real value of the ecstasy of feeling by which the mortal, strangely transported out of himself, imagines he is translated into divine communion. Is it an actual mingling of his being with the primal energy of things? Ecstasies of love and religion and the like are real conditions of mind which plainly ought to be taken account of by a positive science apt to ignore or despise them. Physically they no doubt mark an exaltation of the nervous system by which feeling is rapturously inflated, thought diffused into vague and spacious feeling, and the outer world dislimned into almost shadowy unreality: the customary organized forms of adaptations to the environment dissolved for the time and the self expanded into a sort of formless being. Is the rapture then really an entrance into a higher sphere of transcendent being? Or is it, like the extraordinary rapture of feeling and wonderful illumination of an occasional dream when, their proper paths of association suspended, the waves of flickering ideas usually scatter to meet at

“ Till warned or by experience taught, she learn
“ That not to know at large things remote
“ From use, obscure and subtle, but to know
“ That which before us lies in daily life
“ Is the prime wisdom ; what is more is fume,
“ Or emptiness or fond impertinence,
“ And renders us in things that most concern
“ Unpractised, unprepared, and still to seek.

Paradise Lost, B. VIII. 190.

random, really an illusive joy and knowledge which is seen to be of no value, perhaps to be absurd nonsense, on being brought to the test of waking reason? Or may the dream-illumination itself perchance be, as once reckoned, the divinely vouchsafed vision of a superior spiritual insight?*

A notable fact is that the transport of being is a condition of things which can be more or less actively excited in a suitable temperament by such material means as alcohol, opium, and in an infinitely expansive manner sometimes by the inhalation of nitrous oxide gas. One reason indeed why mankind show themselves inveterately prone to the use of alcohol or opium or like-acting drugs all the world over is that these substances exalt the self to a sense of power and feeling of beatitude, delivering it from the bonds and pains of the actual environment, and thus translate the finite real of adaptation into the unlimited ideal of desire. Pathological the extravagant exaltation certainly sometimes is: nowhere is exultant optimism and inflamed sense of happiness more marked than in the extraordinary elation of feeling and self-confident audacity of sanguine thought and enterprize—

* "And yet, as angels in some brighter dreams
 Call to the soul when man doth sleep,
 So some strange thoughts transcend our wonted themes,
 And into glory peep."

HENRY VAUGHAN.

monstrously irrational except by occasional chance—which notoriously herald the invasion and accompany the progress of general paralysis of the insane ; a condition of advancing cerebral degeneration in which notwithstanding a persistent exaltation of feeling, owing probably to a toxic product of the degeneration, the nerve-paths of normal intellectual associations are by degrees visibly damaged and finally destroyed. Are we then to think that the ecstatic expansion of self into a sort of luminous tenuity of feeling or melting into space with simultaneous contraction of the outer world signifies an actual translation into a higher life? A consideration not irrelevant is that a quite opposite feeling of deepest dejection and desolate misery with appalling loss of sense of realities—a vast, vague, ineffable woe—notably overwhelms the victim of profound melancholia and was once thought to denote actual possession by the devil : notoriously on that memorable occasion when the devil, driven out of the demoniac, entered the Gadarene swine and drove them headlong down a steep place into the sea.

Evidently the state of exaltation is much the same whether it is stimulated by chemical agents from without, such as alcohol and opium, or is produced by some subtile toxin generated within the body, as seems to be the case in general paralysis, or is induced by the appropriate mental excitement and exclusive exercise of a particular

cerebral tract of thought and feeling, as in the religious ecstatic. Has it then more spiritual value in the one case than in the other? Can the mortal by fit use of wine become temporarily divine? Strange it would be to think that a suitable drug can thus be the chemical means of opening and making straight a path to the infinite. And yet the drug and the nervous molecule on which it acts are equally divine; they reveal their kinship by their affinities; and their joyful elective intercourse when they embrace betokens a note of harmonious unity in the vast and mysterious complexity of things.

However that be, putting aside the futile consideration of the primary cause and first principle of things, which is the eternally reiterated absurdity of human vanity, and confining attention to secondary causes, it is certain that the ecstatic transport of being marks a diffusive stimulation of the individual organic life and an accompanying dissolution of the cerebral life of relation with the external world. So far there may be said to be a sort of approximation to, if not mingling with or melting into, universal being; for the organic life is nearer in nature to and in more intimate sympathy with the organic life of nature, on which it depends for the matter and force necessary to maintain its being and serve its functions, and with which in the rapturous outbursts of spring it shows so intimate and remarkable a sympathy. Never does nature seem so divine to its creatures as then.

In the ecstasies of love and religion—and the religious trance of the ecstatic saint is manifestly often a thrilling sublimation or spiritualization of the physiological love-passion—the transport is apt to be vast and indefinite, intellectual forms being swamped and personality dissolved into undefined feeling ; but in the more sober transports of the great musical composer, of the enraptured poet, of the truly inspired artist of every sort, the inspiration is continent and creative, irrigating rather than overflowing, being founded on and conditioned by a solid basis of previous intellectual acquirements which it animates and impels to fit organic synthesis. So the great work of art exhibits concentrated power in fine form of beauty ; the aim and effect of it being not pleasure only, as often alleged, but also the power manifest in the pleasure. It is otherwise with the sundry and diverse superstructures of myths, fables and dogmas which religious superstition has built upon the rapture of feeling at different times and places ; they had no such rational warrant in reality ; were plainly the fanciful and oftentimes grossly irrational notions pertaining to the particular intellectual development of the time and place. Behind or beneath which myths, dogmas and other forms, fit or false, of expression, inspiring and sustaining them, there was, nevertheless, the sort of transcendental feeling that was abiding however much and often its vesture was changed. An interesting reflection

anyhow is that if the ecstasy be an incomplete dissolution of personality by partial absorption into the infinite it must be surely prophetic of a complete dissolution by an entire absorption at individual death.

Thus much for speculative disquisition to which, if it provoke the natural enquiry what it has to do with organic variation, the answer may be made that the inspired person of any sort is, after all, a supreme instance of organic variation.

II.

Forasmuch as organic variations from the same stock in the same circumstances differ, being weak or strong, stable or unstable, well- or ill-qualified to profit by presenting opportunities, the full outcome is not the product of suitable environment only but implies intrinsic quality and energy, something in the prosperous variation not passively suiting the circumstances only but prompt to react to and take advantage of them. Responding probably in the first instance to some obscure stimulus in the environment, it is itself endowed with an innate impulse to become and be ; as vital outcome of the organic unity from which it proceeds it embodies an intrinsic unity straining after a specific realization of self. Therefore it is that in the reciprocal interaction between it and the environment it is not just the passive

object of a process of outside natural selection, but itself works on the environment to modify it in some measure to its liking: there is natural election and adaption on its part as well as natural selection by the environment, an inherent structural impulse or vital tension urging it to fulfil its proper being. The good quality finds good in bad surroundings and profits by it, the bad quality chooses bad in good surroundings and feeds its growth thereby. *

Is the creative growth of an organic variation, after all is said, always a matter only of the slow accumulation of minute additions through immemorial time? Is it absolutely true that nature never makes a leap? May it not perhaps be that the organic impulsion sometimes reaches such a tension in young forming matter plastic to surrounding influences as to issue in a sort of evolutionary explosion, an extraordinary impulse of the organic flux being then moulded by circumstances into an upleap of life? An upleap in that case within the bounds of the same species; perhaps

* The term *natural selection* has not perhaps been quite a happy designation seeing that it is apt to be misunderstood and used to signify an all-potent outside agency which arbitrarily selects and fashions, if it do not actually cause the suitable variation; whereas variation and environment select as well as are selected, interacting as part of a common nature in the production of an equilibrium, and the variation grows by mutual adaptation and combination. Neither organic cell nor individual organism could ever exist separate from its enviroing medium with which it is not in conflict only but in communion.

even sometimes into another so-called species, for intermediates often bridge the gaps between species and confound distinctions. A not entirely strange event, if it happen, seeing that when a common human stock gives birth to an uncommon genius nature does make a very palpable leap, progressing then by multiple proportion rather than by continuous addition. The individual mortal, like the individual plant or animal, bursts the formidable fetters of custom, always so mightily potent to make men what they are, and to keep them as they are and as for the most part they like to be.

The conjecture may perhaps exact support from the diligent observations of the eminent Dutch botanist De Vries on a long series of breedings and crossings of plants. The results of his numerous and industrious experiments have fully convinced him that the ordinary continuous variations occurring normally, on which Darwin supposed natural selection to work, are merely indefinite fluctuations due to light, soil, space, climate, moisture and the like conditions, and take no part in the origin of species; although they are of the nature of acquired characters and capable of hereditary transmission they are not naturally selected to make new starts of evolution. On a multitude of careful observations he has based a theory of so-called *mutations* which is gaining large acceptance in biology—the theory that definite co-ordinate variations of discon-

tinuous kind, new forms or sports of complete and definite character, arise suddenly and abnormally by a single step, and that it is from such abnormal variations, definite and stable from the outset, owing nothing to natural selection, that species originate. Once started, thus fully equipped, those well suited to their surroundings survive and increase by natural selection. Most of our garden fruits and vegetables, he says, are undoubtedly so formed ; they are not the products of a long course of selection, they are sudden sports which as a rule are transmitted to following generations.

Here then is unexpectedly opened a by-way of return to a sort of special creation, to the naïve delight of shallow theology ; and the doctrine of Darwin, although not ousted, is dethroned from the commanding position which it occupied in seeming security. Its range of action was apparently overrated ; scientific enquiry, as often falls out when it is captivated by the brilliance of a new and fruitful theory, being hypnotized for a time and held in such slavish dependence as entirely to neglect observation of contradictory instances even when they are staring : prone ever to neglect a new theory for years after its first quiet enunciation, and then, this once rescued from oblivion and accepted, for years to neglect everything which agrees not with it. Nevertheless natural selection still holds its proper ground, for it is thought to preserve the fittest forms once

they have been brought into being, although it was not the means by which they originated. Instead of speaking of the origin of species by means of natural selection, as Darwin did, we are henceforth to understand that natural selection comes into action only as the means of prosperous survival after the specific mutation has started on its independent career.

If specific characters have thus originated on a sudden by a single step, it seems natural to assume definite structural predispositions in germ-cells, ultramicroscopic prefigurations in them, which duly evolve into definite structural mutations. It is not difficult to imagine that in the innermost of the infinitely minute and invisible are laid architectural plans or dispositions of atoms as definite as those which are manifest in outward and visible structure. To a creature infinitesimally minute enough to dwell inside it and behold its wonderful structure the interior of the atom might disclose a more complex maze of swift and orderly motions than the starry firmament displays, which after all looks a comparative sluggish and rigid system plodding through the fixed function of advanced age.* Be

* Not sluggish, it is true, in its voyage from unknown whence to unknown whither, seeing that the solar system can be conceived as a mere atom travelling some four hundred millions of miles per annum from somewhere to somewhere—perhaps with all its hurry only to come round to the same place in some four hundred millions of years and to go on repeating

that as it may with the invisibly minute, having regard to the multitude of co-ordinate elements and interfusing energies incorporate in a complex organism it is a legitimate conclusion that, besides the fundamental protoplasmic adaptation to the conditions of the environment whereby fluctuating variations are being constantly put forth, there is in the intimately and intricately correlated parts of its complex constitution, thrilled with the organic *conatus fiendi*, an intrinsic aptitude to specific changes under certain unknown conditions ; a sort of pregnant throe or internal spontaneity, so to speak, whereby the mutation proper to the type is evolved. Obviously such a complex organism cannot respond to the external stimulus in a simple and direct way like the unicellular body ; it must needs react in circuitous and complicated ways, passing the impression made on it through numerous and various intricate mechanisms of its special structures—each of these moreover embedding in its intimate constitution the organic reminiscences of innumerable adaptive responses through the ages of its special formation—and in the event so specially disturbing the internal equilibrium as to give rise to the ensuing

its weary cycle until, like a spinning top, it slows down and loses its stability. If a star takes two thousand years to send its ray of light to mortal eyes, it is manifest that the universe is not mightily concerned with what “any mortal mixture of earth’s mould” can perceive or think of its doings.



22 *Heredity, Variation and Genius*

mutation. The novel output which in some species of plants apparently occurs at long and uncertain intervals, abruptly and unaccountably, though it look now like a special creation or spontaneous product, is just the natural and necessary physical effect of the internal complicated processes. After all is said, the organic composition of a species may well be as definite and special as that of a chemical compound, more complex vital compositions occurring not otherwise than as more complex chemical compositions are formed in the orderly ascent of things, and the fit mutation owe more to the inherent information of the vital unity from which it proceeds than to external determination.

A notable fact in heredity is the occasional reversion to an old mould of individual being, a son or daughter who is unlike either parent reproducing with curious fidelity the likeness or peculiarities of some remote ancestor. In the same remarkable manner two persons descended from widely separate branches of a common stock sometimes exhibit a singular likeness, so close perhaps as almost to seem a reincarnation. Evidently there is a tendency of reproductive germinal elements, under the impact of some shock to their customary combinations, to revert to a former combination either in whole or in part, to hit again upon a stable state in which they have been before. For here as throughout the universe unstable tends to fall into more stable matter in

the endless cycle of becomings and unbecomings of things from everlasting to everlasting. An instructive instance of the same tendency is seen when among variations which continually occur in allied species of animals the abnormal of one is just a reversion to the normal of another species. It is notable that abnormal peculiarities in man are normal in his next of kin—in the gibbon, the orang, the chimpanzee and the gorilla. Variations, even when they seem human, are not therefore always the new things they seem ; they are sometimes returns to old characters, reminiscences of remote ancestral processes. And this is true of mental as well as of bodily characters, for stray persons are here and there met with—not necessarily only the monkey-like idiots to be found in asylums—who exhibit curiously simian-like likenesses of mind which no education can ever efface : simian-like ancestral vestigies discoverable in human mind as well as in the grasp of the human baby's toes and fingers and its biting or sucking of its toes. Must we then in such cases suppose, according to Mendelian laws of separate inheritance of characters, that unit-characters of the original common stock have been segregated and laid by latent to show themselves again openly and actively after countless ages of evolution ?

New organic variations being less stable are less likely to last ; they take a long time to get well fixed in descent and are easily unfixed when

they are recent. The domesticated animal loses acquired characters when it is turned wild, reverting gradually through generations towards the savage type suiting its ruder environment ; gains of domestic culture, being useless, are not inherited, having no survival-value do not survive ; they tend to the elimination of the creatures hurt rather than helped by the possession of them and to the restoration of the structural form better fitted to survive without them—of the natural equilibrium that is in the life of relation between organism and environment. In process of degradation as of development the law of adaptive response to the external conditions of life rules more or less evidently. In like notable manner the moral virtues of the human race, being late and loose conquests of culture, still need the constant support and nourishment of a suitable social medium ; they are easily effaced in uncivilized surroundings, where indeed they would be not merely useless but an incommmodity or positive disservice to their possessors.* Among a tribe of low savages a life moulded on the Sermon on the

* Noteworthy is it how loose-knit to character and easily undone are the altruistic acquisitions in comparison with the self-regarding instincts ; pride, vanity, envy, emulation, and the like passions can outlive the moral virtues lasting longer and stronger sometimes than the love of life. Witness, for example, the case of a lady dying of cancer who was wretchedly unhappy until she got a nurse who could do her hair in the usual fashionable and extravagantly towzled manner, when

Mount would not fare well, no better perhaps than it would now in civilized nations ; it could not be a happy life and might not be a long one ; and the strict adoption of the lofty principles of that discourse by the tribe would be more likely to lead to its extinction than to its continuance on earth. How clean and soon the moral gains of culture may be put off by civilized peoples is shown by the hideous explosion of the brutal instincts, self-conservative, predatory, and sexual, when the customary restraints are temporarily swept away by panic or by passion. Neither reason nor moral sense makes the least appreciable appeal to the brute inside the man the function of whose finest mental superstructure is thus temporarily effaced, as happens so easily when the ambient social medium is removed and the inflamed basic passions explode violently. For the time being he is as naked and not ashamed as the infant on which the constantly applied and steadily moulding influences of the social body into which it is born have not yet put on a fitting

she was immensely comforted. Their mental mechanisms, like the mechanisms of animal instincts, are now so infixed in structure that they pass unchanged from generation to generation ; bespeak indeed the very beginnings of social life in which they had their birth ; whereas the altruistic feelings are a later and more tender growth under culture. The various laws which have been found necessary in every civilized country to curb individual propensities to do wrong are just a complicated machinery to transform the natural into the social man.

moral and intellectual vesture ; without which, notwithstanding its innate human heritage, it would, were the experiment made, grow up into a repulsive spectacle of brute-like savagery. So much does steady fashioning do to make man by habit of growth the decent being which he is apt to think he is by natural grace. In the last war against China by the allied troops of Europe and Japan, when rape, robbery and murder were hideous features of inglorious victories, the Japanese only were comparatively blameless ; for they, urged by the strong motive to rank as a civilized nation, advisedly and rigidly enforced for the occasion a rule of decent restraint which was brutally outraged by the unloosened passions of the Christian nations. Looking to stand on an equal moral level with the Christians Japan enjoyed the flattering surprise to behold itself an artificial exception and example. So quickly and completely in stress of trial can be put off the moral vesture which has been painfully put on for nearly two thousand years and still fits but loosely.

Very different it is with the stable structure of a disused organ or instinct which, dwindling in slow atrophy through the ages after it has ceased to be of use to the species, long persists as a discoverable remainder. The anatomist still detects the relics of lower limbs hidden in the whale's sides, and the basic instincts of the savage lie deep and strong in the civilized man. Nor could it go well with the human species if its

elemental passions were extinguished, for without them the qualities of moral being would want root ; they could not grow as they do by natural process of development, and blossom into fit spiritualizations of the sensual ; for the animal nature is the crude material upon which social culture impresses the moral elegancies.* Whether the disappearance of disused organs in the species is owing to the direct inheritance of the wasting effects of parental disuse, as Lamarck supposed, or really, as Weismann maintains, to the consequences of *Panmixia* whereby the average structure is steadily lowered in the species because, being of no benefit to the individuals possessing them, they are no longer fostered by natural selection, that is a question which is still actively disputed. Disputed too perhaps with over-eager

* To despise and maltreat his lower animal nature and to strive to rise out of it, even to get rid of it, may be logical in one who believes in the fall of man from a high state of spiritual being sometime on earth ; but is absurd intellectually and demoralizing in him who believes that mankind from its beginning has been rising and is destined to go on rising to higher being ; whose ideal is not a dim memory of a sinless state to be painfully regained, but an obscure aspiration to a blessed state of perfection to be achieved and enjoyed. He must respect and wisely use the forces of his animal passions, perceiving and acknowledging that his sins and sufferings as well as his virtues and joys have had their proper function in the process of his natural evolution—and will be present in its perfected essence. If man had been all virtue and no vice, he would probably have been extinct long ago.

and profitless energy because of a lack of clear comprehension of the problem and of the necessary precision of terms.

Obviously the answer to the controverted question whether acquired characters are transmitted depends upon what is meant by the word *acquired*. According to Lamarck's theory of evolutionary adaptation (so long neglected and so much misrepresented) hares have the swift pace providentially fitting them now to be hunted for human sport because they have inherited the organic values of ancestral practice. Giraffes have long necks because by stretching their necks to reach food which was almost out of reach they thus initiated a minute modification of structure which their offspring inherited and gradually developed. It was not only that by virtue of fitter structure they survived in times of scarcity and propagated their like when their less fortunate fellows died of starvation, but growth of structure by exercise of its successful function bequeathed more capital to the species, infixing something of the second nature which habit of function made. The hornless ancestors of deer developed thick frontal bones and eventual horns by rubbing and ramming their heads against one another in fight and play and transmitting the thickening gains to their progeny ; notwithstanding that, looking to the results of such development, it is not very evident how a thirty-pointed monstrous antler weighing nearly twenty pounds could ever be so useful to the animal

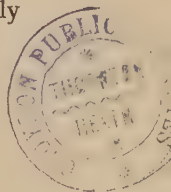
for attack and defence as a less cumbrous and straighter horn might have been. Does nature which manifestly makes such seeming prodigal waste of material and so many seeming failures in its process of evolution, after all, work entirely on utilitarian lines? Or is it perchance that man just creates the purposes he finds in things, as he himself creates the world in which he finds them? However that be, in no case was it meant that the acquired character was actually transmitted as such to the immediate descendant. The character necessarily dies with the parent's body; nor could the microscopic germ contain in its minute self the exact structural equivalent of its parent's acquisition. Lamarck surely never imagined that the particular offspring inherited more than a predisposition to its parent's special exercise of function and sequent growth of structure. The real question is whether ancestral practice ever produces the smallest imaginable modification of the germ in the acquired direction, initiating an inclination of character which grows by adaptation and gradual accumulation of increments through the ages; whether in fact the germ inherits a special tendency, declaring itself in feeling as a *want*, to the formation of a similar character and, thus inheriting, develops it further than the parent in similarly adapted surroundings by virtue of the innate gift and intrinsic impulse. Does it perchance thus possess in invested capital something of that which its parent laboriously acquired?

As in the nervous system of the child now is the innate organized capacity quickly to learn to walk and talk, a capacity which its ape-like ancestors had to acquire slowly and painfully by long and repeated adaptations generation after generation from the very cradle of humanity—still outlining rudely and briefly in the successive stages of its embryonic development an epitome of the procession of life from its beginnings on earth—so in the occult atomic structure of the germ may offspring inherit a natural drift or tendency originated by ancestral slow acquisition.

The growth of such inherited tendency by offspring need not of course take place in all the members of a succeeding generation and may be manifest only in the fulness of time. To germ as to mortal happen time and chance, and each fares well or ill as its fate decrees. In the mysterious germinal unions in which so many very complex genital factors and conditions are involved it is only seldom that the combining elements are so luckily complementary that the perfect product ensues. Moreover, the possible mischances to which a particular germ-tendency acquired by parental experience is liable are incalculable: it may not survive directly in transmission because in the fusion of its germ with the germ of the other sex it is checked, curbed, suppressed, qualified, or quite sorted out and laid by latent, or even perhaps broken up into elements which, obeying their affinities, go to form

other combinations. Even if it survive, there is a future environment, favourable or unfavourable, to reckon with. Time, again, which is so precious within the brief compass of a single life is of no account in the life of the species. And the Lamarckians may justly claim the right which the exclusive advocates of natural selection so freely use, to postulate a long course of time for the minute cumulative additions necessary to convert the initial tendency or variation which is of no imaginable use into structure that serves an end. When the wild pansy is planted in garden soil it does not change at once ; the variations in the colour and size of flowers appear in the course of generations, never in the first generation, the transformation by external influences being gradual. Restrict the term "acquired characters" to the manifest inheritance of the manifest acquisitions of parental structure, excluding the notion of acquired germ-tendencies to evolve duly in succeeding generations, and the non-inheritance is not likely to be seriously contested.

Is it not strange that the innate boon or bane of acquired parental character has been so absolutely denied to offspring ? The theory of Weismann as originally propounded by him and eagerly acclaimed by his followers, although now apparently modified in some measure, was that no quality or character acquired by parents through the functions and habits of life in the changes and chances of environment was ever constitutionally



inherited. Neither offspring of hare or of giraffe profited anything by parental habits of life and growth ; all the gradual gains of evolution were the result of the accumulation of successive small variations favouring the survival of the creatures in which they *accidentally* occurred. Nature just selected the fit *spontaneous* variation and went on selecting the fit additions to it generation after generation, no variation owing the least intrinsic predisposition to any constitutional modifications of the well or ill functioning parent. Such is the large call made on an unlimited number of spontaneous or accidental variations—so many apt special creations—without any explanation of their origins, with the positive assurance only that parental habits of function had nothing to do with them ; for natural selection does not make the initial rudiment—that is admitted—it only takes advantage of it when made, although with an amazing prescience it is thought to make the fit choice and additions when the nascent variation is so minute or so circumstanced as yet to be no conceivable emolument, perhaps even an inconvenience or seeming disservice.

If, as assumed, the highly favoured creature which puts forth the mysteriously begotten variation does so spontaneously, its offspring in succession putting it forth spontaneously when it is lucky enough ; and if not it then another creature of the species, and thenceforth others here and there sporadically in ever increasing numbers

until the species consists of those having it, those not so gifted by grace having died out for want of it ; that means that from the interesting hour when the union of the two primary germs of ape-man and ape-woman issued in the first variation leading to the development of the human species, thenceforth onwards through numbers numberless of years, no individual constitutional modification has had the least direct effect upon the character of the progeny. The acquisitions of human evolution through the ages, all the differences between *Pithecanthropus erectus* and man at his highest estate, have been wholly and solely due either to so-called spontaneous variations, or to variations caused by unions of parental germs and the sequent developments of such progressive variations by natural selection.* Now certainly, whatever may have been the case once, there is in the substance of the germ-plasm with its many possible combinations of many million constituent atoms and their memories of past structural dispositions conceivable room for any number of combinations determined by intrinsic affinities or extrinsic impulses.

Along with the theory of non-inheritance of

* Anatomists have been much exercised in lively disputes whether *Pithecanthropus erectus*, the fossil bones of which were discovered in Java in 1894, is to be considered human or anthropoid. What is certain is that *Pithecanthropus* is more apelike than any known human type, more manlike than any known form of ape.

acquired characters goes the theory that the germ-plasm is immortal ; that there is a continuance of actual substance from generation to generation, an ever so minute part of the specific plasm contained in the parent's egg-cell—in the nucleoplasm of it—not being used up in the building of the offspring's body, as the rest of the plasm is, but sacredly reserved in a kind of holy of holies for the formation of the germ cells of the following generation to which it is substantially passed on. The body or *soma* only is it which is mortal ; the precious bit of sequestered germ-plasm is immortal, passing through a succession of individual conduits—through priests and prophets, sinners and saints, idiots and immortals—whose several modifications of characters during their lives nowise modify it. The welldoer is the unsympathetic host of a bad germ, the evildoer is redeemed by his hospitality to the good germ. Necessarily the sacred plasm dies with the individual body when that dies, but the death is then an accident not a natural death ; the natural death of the soma causing the accidental death of the germ. When Judas Iscariot hanged himself—if he did hang himself, which is problematical, seeing that one evangelist only deems so tragic an event worth mention—it was the adverse fate of the plasm which he might otherwise have transmitted untainted by his sinful nature.

The two theories—*this* of a supremely fine substance of quasi-spiritual and immortal essence,

housed and nourished for a time in a mortal body but not otherwise physiologically related to it, and *that* of the noninheritance of acquired characters—are largely used as mutual buttresses. To the enquiry why acquired characters may not be inherited the prompt answer is because that would be contrary to the sacred truth that the germ-plasm lives a secluded life aloof in the body ; and to the enquiry why the germ-plasm may not be affected by the sundry and manifold changes of a mortal life the equally prompt answer is because that would be contrary to the truth that acquired characters are not transmissible. All which would be excellent argument were either theory satisfactorily proved but may fail fully to convince so long as neither yet rests on a solid basis of proof. The bacterium which acquires increased virulence by transmission through another creature than that from which it is transferred, thus bequeathing capital made out of its new environment, violates the law of non-transmission of acquisition in fearless fashion. Thus far, too, the prolonged experiments and careful observations of De Vries on plant-life seem to disclose other instances of the breach of that supposed law, for they favour rather than disfavour the theory of such inheritance. In the end the question can only be answered positively by the exact observations and experimental researches of competent workers mutually and methodically co-operating in right directions of

36 *Heredity, Variation and Genius*

enquiry : their patient labours must prove or disprove the sound or unsound speculations of impatient theory.

Is it true that the germ-cell forms no living part of the body in which it lives and on which it depends for life, but is something living in yet practically aloof from it, in but not of it ? While every other differentiated cell is an integral part of an organic unity, in community of vital interaction, represented in its whole life and function, incapable of living separate, are we to think that the germ-cell or any part of it has no such intimate physiological relations ; that it lodges there monklike in close seclusion, independent and indifferent, immersed in its present self and silently brooding on its life to come ; that it only exacts the nourishment it needs from its living medium, thriving well or ill according as it is well or ill fed ; affected it is true by toxins which hurt its nutrition, but not otherwise hurt or helped by its organic environment, let the modifications of this from birth to death be never so great ?

In that case the conclusion follows that when in his maturity or later a person born of a poor and vicious stock, but subjected afterwards systematically to good influences in wholesome moral and intellectual surroundings, emits a reproductive germ it contains no trace of that which has been acquired by him and incorporated in his structure ; and again that the reproductive

germ of a well-born person debased and degraded by bad training in unwholesome moral and physical surroundings suffers not in the least from the acquired mental and physical degeneration. The immortal stream of life-plasm thus flowing down through a succession of individual conduits, neither purified nor polluted in its passage, it is perhaps a little sad to think that in the painfully perfecting process of humanization through the ages the seed of the righteous profits nothing by his father's righteousness, as it is certainly strange to think that the germ-plasm is the one bodily secretion which is nowise used and renewed in the economy of the organic commonwealth. More agreeable might it be to the notion of a silent and continuous evolution of things to imagine that every year's or even every day's plasm witnesses to the individual character of the time and circumstances. Withal the conviction might instil a sterner sense of responsibility throughout the season of procreative activity did Nature allow the least consideration of consequences ever then to enter the procreator's mind.

Looking far enough back into the origins and deep enough into the processes of organic evolution, it may someday be perceived and acknowledged that reason itself, which is the discharged function of man's superior brain, is nothing else but the incorporation in his complex cerebral organization of the cumulative adaptations to the

38 *Heredity, Variation and Genius*

conditions of his environment from the beginnings of his being ; just the structuralized *ratio* in mental organization, the static reason, of which the conscious reason is the function. No one reasons by the reason he is conscious of, any more than he imagines by the imagination which he forms ; his conscious reason is the performed reason, as his imagination is the formed imagination ; both products of the unconscious or very partially conscious processes of the underlying cerebral operations. Man being the Nature-made means by which Nature is made better in its process of evolution, the same rational processes ruling in it and displayed so abundantly in the marvellous structures of organic life, vegetable and animal, are carried on through his mental organization : life in mind a continuation of life in the world. In the process of evolutionary equilibration between him and the outer world it is Nature which structuralizes in him the reason which he finds in Nature and, because he is conscious of, magnifies mightily and is so mightily proud of. Consciousness is just the illumination of vital experience in practice, the reflective outcome of the realized action.*

* Gross materialism it will perhaps be said, and to say so be deemed a sufficient refutation. "One calls materialist every philosophy which defines thought as the product of a compound whose elements do not imply thought." But why does not a superior philosophy exactly define thought for us? That would help us to understand what are its elements and

III.

Objections can certainly be raised to bar instant assent to the doctrine of a cloistered seclusion of the germ-plasm. Whence the infinite possibility of variations without help from without, the accumulated gains of development through the ages, the exhaustless evolution of new energy without any corresponding involution, the eternal unfolding of things without a precedent infolding? Although it is true that by calling the variations spontaneous it is not supposed that they are special creations springing into miraculous being inexhaustibly, meant only to imply that although coming somehow from somewhere the unknown causes of their origin and initial sproutings are yet mysteries, it is still asking much in the absence of positive knowledge to grant all the creative independence claimed for them. The causes and laws of variational origins may after all have no small bearing on the question whether acquired

what they do or do not imply. Is thought reason, or is it strictly only conscious reason? And if ever unconscious reason, where and by what is the rational work done? The doctrine of rational materialism, I imagine, is that a static reason or *ratio* in mental structuralization which becomes explicit in thought is implied in the justly proportionate or *ratio*-nal constitution: reason invisible structure, as structure is visible reason. If reason in mental structure becomes by some most subtile process of cerebral reflection conscious, is that really more wonderful than for a wondering savage to see himself by reflection in a mirror?

characters are inherited ; for it is not unlikely that their origins are to be found in obscure adaptive responses to the conditions of the environment which are transmitted.

That two complex human germs, modified and qualified as such germs have been by successive combinations through countless generations, inheriting withal qualities dating from the very beginnings of life, can in combining produce variations without end is easily imaginable, but how could the two primal cells from which the countless millions of living creatures originally sprang acquire such infinite possibilities of variation ? When the primitive unicellular organism divided into two equal halves and these halves divided in their turn, and so continuously onwards, a series of equal divisions and subdivisions might have gone on unchanged world without end had there been no change in the descendants. But inasmuch as the divisions could hardly always, if ever, be exactly equal, no two things on earth being exactly equal, and those which survived in the struggle for existence had sometimes to adapt themselves to different external conditions—and the least imaginable external change would not fail to cause a suitable reaction—they necessarily acquired individual peculiarities, transmitting these when they divided, and so started the variations which multiplied to build the multicellular organism. Here then was a direct transmission of acquired characters : the first differentiations

plainly due to the inherited effects of the action of the environment on the individual : evolutionary variation through involutional adaptation the original cause and primal rule of Nature. Yes, say Weismann and his submissive followers, that was so once but it is not so now ; such action only went on in the lowest unicellular organisms ; when the cells were differentiated in multicellular organisms the primal rule was abolished, the distinction between body-cell and germ-cell made absolute, and the transmission of acquired characters to the germs abruptly ended. Thenceforth onward and upward from the simplest multicellular bodies to the highest human germ-cells through untold millions of years the variations have been either spontaneous starts, or due to successive combinations of germ-cells, none of which owed anything but sustenance to the vitally environing body or to the larger physical environment in which they and it chanced to be placed. An inexhaustible fund of variation possibilities with rigid exclusion of outside influence even so much as to excite the intrinsic variation, that is the apparent assumption.

Without doubt the rule of organic progress from the simple and general to the complex and special is for a successive division of labour to go along with a successive differentiation of cells. In multicellular organisms the cells were first differentiated for growth and reproduction ; after that the body-cells underwent further differentia-

tions to constitute the various tissues and organs, some still retaining the capacity to reproduce themselves, but all failing in the growing stiffness of old age to do even that ; the reproductive cell alone able to reproduce the whole body. And not then except by conjunction of germs when, as happened in process of differentiation the sexes were separated, first on the same plant or animal and afterwards on different individuals. But does it therefore necessarily follow that the body-cells lose all trace of original reproductive capacity, or that the reproductive cell is nowise affected by the modifications of their functions during the life of the individual? May it not be that morbid growths sometimes tell of awakened memories? Specialized parts owning a remotely common origin, notwithstanding their differentiations, are certainly apt to retain silent memories of a general function. It is noteworthy that the blind man's face appears sometimes to regain a sensibility to the proximity of objects which has long been the special function of the differentiated visual sense ; he feels with his face at a distance, so to speak, the mother-sense of touch vaguely resuming in stress of need functions long delegated to a specialized organ of vision. What happens again when foetal structure is produced in another part of the body than that which is its natural home? Is a particle of the cloistered nuclear plasm broken off which after vague wanderings settles there? Or does a differentiated cell, suddenly

remembering, resume a long forgotten primal function ?

However that be, it is plain that in the vast and varied procession of organic Nature a separate reserve of reproductive capacity was found necessary to continue progress, specialization of parts tending to dissociation and consequent sterility of general function in tissues as in mortals. Could there be any thing more exactly and intelligently specialized for its lifework than a bee or anything less intelligent outside its specialty ? Men are likewise more or less intelligently specialized machines, and for the most part little intelligent outside their mental automatisms ; a new and pregnant notion springing up outside the regular grooves of thought being a sort of explosive shock which occasions violent reactions of antipathy, contempt and angry resistance, to be succeeded haply in due time by quieter reactions of assimilation and adaptation.

Nothing is more certain than that portions or sections of the mental organization (the so-called one and indivisible mind) as well as of the motor organization do get set in fixed forms of automatic activity, and that over-specialization of enquiry and thought leads to intellectual narrowness and consequent absence of deep insight and wide outlook ; for which reason in the mental development of the human race there is always need of the man of large genius, not over-specialized, to absorb, collate, co-ordinate and fructify the results

of specialization apt to run into barren details. The genius, however, would be little worth, an ingenious speculator only, who, unresponsive to outside influences, did not absorb and merge into himself all the special values, present and pre-existent, and fuse them into the excellent variational outcome. He is one with Nature, and his achievement is Nature fulfilled through him, because he is susceptible to every external stimulus which educes the capacity and conduces to the complete development of a richly endowed being ; expressing finally when and as he can, concentrated in defined form of art or invention, the distilled essence of the crude material which he has consciously and unconsciously imbibed. Into the superior protoplasmic susceptibility of his sympathetic brain steal imperceptibly the subtle influences of surrounding Nature, inter-working there—for the most part subconsciously—to be projected outwards in forms of beauty and invention.

A second objection may be urged to the dogma of the non-inheritance of acquired characters. Whence comes the right to fix a complete distinction between the reproductive processes which go on regularly in the organs and tissues of the body with their several secretions and excretions and the product of the whole similar reproductive process of the body, which is essentially an overgrowth and, so to speak, excreted secretion of it? A secretion, that is, not used internally

for the maintenance of a passing organism which has its brief day and dies, but ejected outwardly for the maintenance of a continuing species which has its long day ere it dies. For when all is said nutrition is much like a continual reproduction and reproduction an excess of nutrition.

In estimating the possible working of the body upon its reproductive germ, it is necessary to understand and bear well in mind that the question is not of the set action of an unchanging bodily fabric ; it is a question of the whole bodily functions in process of continual flux as they are modified by exercise and growth to habits of exercise and of their subsequent reactions on the constituent elements. The body is not a fixed but a modifiable fabric, function developing structure ; and this more particularly in the evolution of the nervous organization and the faculties, bodily and mental, served by it in the individual life of relation during its periods of productive activity. Habits of function incorporate in structure are thereafter expended as function, and every process of function involves internal effects, physical and chemical, of subtile and wide-reaching vital consequence. While there may be no evident transmission of acquired characters by old and formed structures of the organism (supposing such to be acquired) the transmission might still conceivably take place in young plastic and forming parts capable of easy elemental reproduction. How expect in the dull, slow,

mechanical life which is only just alive that which may be natural in the quick, active, adaptive life which is much alive? * On the whole it is somewhat strange to think that productive activity within the body can be severed entirely from reproductive activity by the body ; more natural, if not necessary, to think that the forming germ is somehow susceptible to its modified bodily environment, exhibiting the effects in variations which, informed by the parental constitution as it then actually is, witness to parental acquisitions of structure.

The opinion that an elementary particle of a bodily unity specialized for reproductive purposes lives in physiological seclusion is directly contrary to the whole trend of scientific enquiry, which goes to show that when one organ suffers or joys all the organs suffer or joy more or less with it, being members of one body and members one of another ; and *that* inevitably because of the intimate physical association, nervous and circulatory, and of the co-operation to one vital end of the several very complex and subtile chemical pro-

* Although life is habitually thought and spoken of in the abstract as a constant entity, the word sufficing without thought of its signification, in the concrete it is really of very diverse quality and value, ranging in dignity continuously from physico-chemical to psychical activity. The epidermic cell is not on the same life-level with the cerebral cell, any more than the *Protococcus* with a Prime Minister or the *Amœba* with an Archbishop.

cesses of the various parts of a living organism. As the so-called internal secretions of organs regularly pour into the circulating fluids of the body unstable substances which in continual flux of compositions and decompositions, by means of numerous and various fermenting enzymes, excite or inhibit its functions in various subtile and yet inscrutable ways—each organ, too, perhaps, contributing specially acting chemical agents to do its special work—it is hard to believe that any part of it lies outside physical and chemical influence.

All the more hard seeing that when the reproductive organs at puberty begin to form the precious cells destined to continue the species their activity is accompanied by, if it does not cause, a profound modification of the whole mental and physical being. Youth and maiden, instinct with the productive energy of Nature, then feel and think as they never felt and thought before, being thrilled with new sensibilities by virtue of nervous subtile changes yet undetectable by the nicest aids to sense ; with which changes of adolescence go along fresh sensibilities to the social environment and physical growths of moral feeling that were lacking in the child.

A third objection proper to be taken into account is that such gross and manifest deteriorations of parents as bodily mutilations and injuries, scars, pierced or cut ears or noses, artificially deformed feet and waists, docked ears and tails, and the like, cannot rightly be called acquired

characters.* They surely mark a loss not a gain of individual *character*. The tailless cat has suffered a deprivation of, not gained an addition to, its structural character. Is there not an essential difference between the mutilation or injury which, being a loss, is therefore a subtraction from character, and the modification which is a constituent part of its living being and growth? The latter, being part of its character, might well be inherited in the germ-tendency; the former, being not part but loss, is not likely to be inherited. Progress in the life of relation between the organism and its environment may then have reproductive consequences which injury or mutilation cannot have, the plastic forming part still obeying the primal law of unicellular acquisition which no longer rules in the rigid formed part.

But what, it may be asked, of the gradual wasting and ultimate disappearance of a disused organ which has become useless in the changed conditions of the struggle for existence? Is the slow wasting due wholly, as alleged, to the consequences of *Panmixia* whereby, owing to indiscriminate unions of individuals some of which have the organ poorly developed and are at no disadvantage on that account, its average size is gradually reduced in the species, it being no longer fostered by natural selection? Admitting

* "It can hardly be doubted," says Weismann, "that mutilations are acquired characters."

the certain effects of such a slowly eliminating process, it may still be argued that an unprofitable organ not needed and not used in the life of the animal does not stand on the same footing in regard to inheritance by offspring as an active and useful organ. Can that which furthers the well-being and maintenance of the species, working as a factor in the order of Nature's being and becoming, be compared to that which, being nowise a benefit, but now an incommmodity or actual let and hindrance, belongs to the order of disintegration and passing away of things? Moreover, the disuse of an organ in a complex body of vitally interrelated parts can hardly fail to have some effect upon the life and legacies of the integral unity. Whatever its nature and value the internal secretion once contributed to the circulating fluids is no longer available.

A fourth reflection, though apparently remote yet not quite irrelevant, to be made in relation to the doctrine of non-inheritance of acquired characters is that mortal minds, transient and infinitesimally minute pulses of an infinite universe, cannot choose but represent or picture things in terms of five—practically two—very limited senses impressionable only by a few and comparatively coarse stimuli, even when sense is fortified with the most ingenious and powerful instrumental aids. So it comes to pass that shut out from observation of the invisible and intangible, all the infinity, mighty and minute, which lies

outside the very limited domain of the senses, and impotent to conceive what is and happens there, they necessarily represent it lamely in terms of subtilized or magnified sense-perception. Giving the characters of sense and experience to that which lies beyond sense and experience they fill the infinitesimally minute with imagined atoms and corpuscles, and people the immensity and eternity with celestial and terrestrial gods, benignant or malignant, who feel, think and act as they feel, think and act, only more benignantly or malignantly ; all these at last but sense-conditioned symbols or fanciful objectivations of the infinite reality which cannot be known, and of which all that can be known, mind and its functions included, are phenomena.*

It is natural to think crudely of the subtilties of Nature even when conception is most subtilized. How help thinking them save in known terms of physics and chemistry? The theory of *Pangenesi*s put forth by Darwin postulated infinitely minute

* A wonderful conceit it would truly be that the ultimate reality of things can ever be represented in any terms of human sense and expression, can indeed be conceived intellectually otherwise than in the man-made world which the senses make for their human users? As well imagine the ant-made world in which the busily working creature lives and moves, urged by a sense of moral responsibility not to waste a precious moment of its short mortal life, is anything like the world of human beings panting for and expecting immortal values, albeit seldom working with equal industrious zeal and conscientious feeling for the good of the community.

gemmules emanating from all cells of the body into the germ-cell which was thus impregnated potentially with every peculiarity of the parent. An actual transference of an extremely minute matter was deemed necessary to account for the hereditary transmission. But is it not conceivable that the informing work may be done without any such material transference? By what marvellously swift and subtile motion does a disagreeable idea or still more a painful emotion instantly traverse the whole body and poison every function of it, bodily as well as mental? The exquisitely delicate vital interaction between every cell of a complex organism whereby "every part calls the furthest brother" may well be something more subtile than any known material agency; an instant transmission of finest rhythmical pulses perhaps rather than a labouring voyage of gemmules, unless perchance minute gemmules be now translateable into more subtile ions. It is possible at all events—and growing knowledge of the subtilities of Nature does not belie the supposition—that every living cell radiates energy in minute pulsations spreading through the continuous or contiguous plasm of the whole organism of which it is a vital part, and that an innumerable multitude of such informing energies converge on the germ-cells in which the organism is potentially represented.* In that case acquired peculiarities

* If we think away the gross material cell-matter with its accompanying notion of comparative inertia, and instead con-

of parents, not accidental but constitutional, might well affect the tone of the fluctuating germ-plasm, even if they did not become distinct tendencies or inclinations ; for in germs as in mortals tones and qualities of substance lie deeper than formal expressions in thoughts and actions.

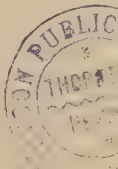
What are thoughts and actions fundamentally but the outcome of minute explosions of complex unstable colloids—sparks, so to speak, of quasi-electric energy? It is feeling which, bespeaking the essential composition or quality of the exploding element, represents the silent continuous energy. Forasmuch then as the organism is not a material fabric only but a living unison to which every constituent part contributes its note, the most complex and admirable harmony in the wide world, albeit a harmony like that of the spheres inaudible by mortal ears, it certainly may be well or ill tuned by precedent ancestral influence. Twice fortunate is it when the fabric is well fashioned as well as well tuned throughout, seeing

ceive the cell as a complexity of intensely active forces, and thereupon further think of all the surrounding matter after the same manner, it will be easier to picture in mind the possible action of such radiating energies. Or if, still thinking fancifully, we conceive the cells in terms of sound instead of sight or touch, picturing its activities as a musical concord, it may not be difficult to imagine its harmonious or discordant effects upon the whole bodily unison. Or if we accept the theory of the disintegration of atoms with the accompanying liberation of intra-atomic energies, what limit is imaginable to the subtilty, swiftness and extent of their action?

that every mental fabric is in some measure framed structurally to receive gladly intellectual waves which agree with it and it likes, and to dislike and reject those which are not agreeable. Not in quality of feeling only but also in radical modes of thought does the individual thus witness to the specific structure and quality of his mental stock ; and as a wish to believe something somehow and a dislike of doubt or suspense are instinct in human nature—desire being unlimited while knowledge is limited—believe easily what suits with its structural prejudice and believe fancifully when there is not knowledge. An innate gift in any case, not ever acquirable by training or experience, is the melody of a beautiful nature expressing itself gracefully with unpremeditated art. Moreover, as quality of structural tone means quality of desire, and desire craves vent on suitable objects, material or ideal, there follow natural trends of beliefs and acts and the consequent organic developments of individual character as disclosed explicitly and certainly in their life-histories. For such history, could we but read it aright, is truly the explanation of what is and the anticipation of what shall be.

IV.

Passing now from considerations calculated to qualify the generally accepted doctrine of the non-inheritance of acquired characters, I go on to take reflective note of some simple facts of



54 *Heredity, Variation and Genius*

observation which unfortunately show how little is really known, how much has yet to be learnt, of the laws of human heredity. The sober truth is that nothing so definite is known as to warrant conclusions of the least practical value. It is not known how it comes to pass that from the unions of the germs of two ordinary human stocks the remarkable variation styled genius is engendered : so extraordinary an outcome from that which is ordinary, something so uncommon from that which is common. It is not known again why one of two children of the same parents issuing from the same womb, on the same bed, in the same house, and reared under the same conditions, grows to be a person of superior mental stature while the other does not rise above mediocrity, perhaps sinks below it. Nay more, although knowing accurately the ancestry, it is not possible so much as to foretell in a particular case whether the offspring shall be long or short, male or female, any more than whether it shall be fool or genius. In the absence of such exact and positive knowledge prescriptive rules of human breeding must obviously be guesswork, despite Mr. Galton's sanguine assertion that "it would be quite practicable to produce a highly gifted race of men by judicious marriage during several successive generations."

Were the optimistic experiment made on the basis of our present scanty knowledge of the laws ruling in human breeding it would

be a welcome surprise perhaps if there was a single specially gifted person alive in the third generation. Pairing two highly gifted intellectual beings in hope of breeding equal or higher intellect the result might well chance to be idiocy or sterility ; if two finely strung emotional persons were wedded in expectation of a fine poetical or artistic genius the product might be hysterical eccentricity or fanatical folly, if not actual madness ; and if the enthusiastic experimenter did not conclude in the end to make use of the comparatively gross material creature of mediocre intellect and elemental animal passions he might do well to relinquish his cleverly planned scheme, content to leave the complex business to the chances of Nature's mysterious operations, which, like the sculptor, seems to need the crude material on which to impress its fine forms. Certainly the suspicion is not altogether unwarranted that if a person gets too far from physical nature in spiritual aspiration he is likely to prove a poor sire, not unlikely to breed an emasculate neurotic or an imbecile. In the end the terrestrial mortal must, Antæus-like, touch earth and imbibe its wholesome material spirit in order to sustain and maintain the virile strength necessary to carry the species onwards to the golden age of wisdom and happiness which unlimited desire expects in time to come and fancy fables to have been in times of old.

Statistics regarding heredity do not yet help.

While admiring the zeal and industry of the students of the new science of biometry founded by Karl Pearson and hoping much from the diligent pursuit of its exact method, it is easy to over-rate the values of its present labours to obtain statistical averages reducible to exact mathematical formulas ; pardonable perhaps to feel an uncomfortable distrust of statistical calculations of ancestral resemblances. How safely trust the applications of measurements to such vague and uncertain characters or compositions of characters as vivacity, introspection, temper, conscientiousness, assertiveness, and the like, where the particular character cannot possibly be separated and defined with any approach to exactness, and where the data collected at large rest on the observations of several persons widely differing in temper and qualifications. That is surely but a poor basis on which to rest exact measures of quantity.

When in regard of a complex and difficult enquiry involving unknown conditions and factors statistics are collected at large by different observers with all sorts of different tempers, characters and qualifications, mutual intelligence and collaboration by right method are practically impossible. Every observation is a product of the fact to be observed and of the observer who makes it, and of the two factors the personal factor is vastly the more important. A single observation by one who knows how to look

and think is worth more than a thousand observations by persons most of whom are incapable of looking accurately and have never learnt to think—the more prone they commonly to see what they wish to see and the more sure of what they think they see—and none perhaps adequately equipped with the requisite precedent knowledge of the subject rigidly to adopt and exactly pursue a right method of enquiry. Multiplication of errors cannot add to the value of the product. To one not competent to rate mathematical values, entitled therefore to speak only with much diffidence, it would seem that the statistical data on which to base profound calculations are too uncertain to warrant sound inferences. Not that the calculations are therefore wrong, for given the arbitrary data those may be accurate even when the data are fallacious or of quite doubtful value. But what is the conclusion worth when there is no security that the data are sound?

Anyhow, whatever the value of statistical information, it does not help in the particular case nor dispense with the necessity of pursuing exact positive research into matters of individual inheritance. That which statistics seem to do is to formulate a general statement intimating or perhaps indicating the direction in which to prosecute useful research. So far, though it is not far, they do something. Take for example the conclusion formulated and lauded as Galton's

law of Ancestral Heredity—namely, that the mean amount of correlation between two parents and their offspring, between the four grandparents and that offspring, between the eight grandparents and that offspring, and so on backwards in the ancestral lineage, diminishes in a geometrical series (one-half, one-quarter, one-eighth, &c.), which is the same for all organisms and their characters—it is a conclusion which, however true on the average of such simple character as height is manifestly not true of individual cases. Anyone selecting for observation different characters of two parents, *e.g.*, the different shapes of their noses, can see plainly that the nose of the offspring may be like the father's nose or like the mother's or an intermediate blend of their noses, or not really like the type of either but of a new and quite different shape; might perhaps see, if he could make the requisite observation, that it was such a combination of latent characters in one or both parents as to give rise to a reversion. It is patent again to common observation that the individual, luckily or it may be unluckily for him, is sometimes much more like his grandfather in features or character than his father, possibly more like his great grandfather or his grand-uncle. Moreover, the so-called law does not accord well, seems indeed to be at variance, with Mendel's theory of inheritance which, segregating characters and distributing them among the germ-cells, supposes

that certain ancestral characters contribute nothing of these characters to certain offspring. Instead of a proved law of inheritance we have at best only the general statement of an average resemblance which, true or not, throws no light upon that which we particularly wish to know and would, if known, be practically useful.

Always it is an aching void of satisfying knowledge which statistics leave in the mind. To learn that nearly the same number of undirected letters will be posted yearly in a certain city, or that nearly the same average number of murders will be committed in it, is interesting as a piece of curious information showing how limited is the human mechanism and how liable it is to go wrong in the same limited ways—for mankind are not inventive in modes of wrong thinking and doing any more than in their modes of right thinking and doing—but it is no more useful than it would be to learn that on a measured mile of a recently macadanized road there will be an average number of so many sharply shaped stones calculated to puncture the motor traveller's tyres. Could the knowledge be instilled into the stone-breaker's hammer so as to instruct and empower it to break hurtless fragments only matters would be very different.

Although it might be safe to say, making a broad survey of men as they are, that sound human germs do not contain equal potentialities of development, seeing how differently and some-

times specially they evolve, yet Weismann and his followers did, or do still, maintain that all normally constituted persons are born with equal capacities of mental growth, different results being due to the environment in which they are reared and grow to maturity. No doubt it would be rash to underestimate the action of the environment on the reactions of organic life from its first stages of development onwards, every phase thereof being influenced by physical, chemical, toxic and nutritive agencies, and in the human case by the additional effective agencies of social tradition, education, imitation and custom.* Indeed, the effects upon individual mental development which the training and circumstances of life do manifestly exert fully justifies the suspicion that much natural ability rests dormant in the race for lack of suitable opportunity to elicit and foster it. But when all is said it seems not less certain that there are essential differences of mentality which, not effaced, albeit sometimes defaced, by a common training, urge their own exercise and are educed by it. That which education can do is to promote culture of self, it can never effect its culture into another self. Strongly and oftentimes ludicrously and

* Experiments have shown how very small changes in the salts composing seawater produce extraordinary abnormalities in the development of the egg of the sea-urchin. For instance, one part of lithium bromide in a thousand parts of water produce great deformities at an early stage.

pathetically powerful as tradition, custom, convention and sameness of environment are to fashion swarms of automatic beings who think and do the same irrational things in the same routine ways—a mode of mechanical fashioning which may certainly account for much that is often ascribed to heredity—and that so fatuously and faithfully that they had rather break one of the ten commandments and “perish everlastingly” than be out of fashion or perpetrate a breach of social etiquette and be proscribed socially, yet there appear from time to time on the one hand recalcitrants who, rebelling against the customary restraints, go their own ways of development or degeneration, and on the other hand defective beings who are incapable of being fashioned into decent social members. One may safely affirm that an unremitting instillation of moral principles from the appearance of his first tooth onwards to the loss of all his teeth by a natural decay would not avail to make a moral being of the congenital moral imbecile; safely suspect too that no training could ever have transmuted the moral nature of Judas Iscariot into that of Jesus the son of Sirach, still less into that of Jesus of Nazareth.*

* If Judas was really the unspeakably vile traitor which tradition accounts him. A good deal might be said in support of the theory that, believing literally in the royal mission and miraculous power of the Messiah, he wished to precipitate the predicted glorious reign on earth which all the disciples eagerly

When a variation occurs in some part of an organism or mentally in the person of genius is it that a natural tendency commonly repressed by a set environment gets free outlet? Or is it that a new environment solicits and elicits the variation? Presumably the natural tendency is the original factor, the new surroundings stimulating and fostering its development. They could not well stimulate it if it was not there, and if there it would be responsive to the least stimulus. It is not credible that Shakspeare any more than hundreds of like-born persons of equal natural capacity who have lived and died in nameless obscurity, clean forgotten as though they had never been born, would have ever been the great poet he was had he not been forced to leave his native town to seek sustenance elsewhere and been thus luckily thrown into circumstances admirably suited to develop his native talents. He could not have found at Stratford the opportunity to study Plutarch, Seneca, Rabelais and Montaigne, whose wisdom he deliberately embodied in his poetry and poured out sometimes in rhetorical rant through the mouths of charac-

expected, being so overwhelmed with remorse when he discovered his mistake that he went forth and incontinently hanged himself. Nor was he quite without excuse if he was misled. Jesus himself certainly spoke sometimes as if he expected his kingdom of heaven to be constituted soon on earth, as a divinely miraculous event not within the compass of human agency.

ters it did not in the least suit ; or the patronage and companionship of persons of high rank, whose loose pleasures he freely shared ; or the old plays stored in the Blackfriars theatre of which he made such large and profitable use ; or the practical experience of the stage which served him so well to construct his dramatic scenes. It is the one acorn falling by happy chance, out of millions of acorns which have no such good fortune, that grows into the majestic oak. And the eminently successful man in the struggle of life, were he modestly grateful, might build an altar to fortune whose favour he has specially enjoyed ; for oftentimes it is not unto him but unto it that the glory should be given.

Of course there must be the requisite virtue in the seed to co-operate with the circumstances. It may perhaps be taken for granted that Shakespeare was the only one of all the persons living in Stratford when he left the town who, had they left it as he did, could have done what he did. Nevertheless it is a just opinion that the average normal ability of the race is capable of much higher development than it reaches in the narrow and repressing circumstances of its existence ; that the constant tendency to variation is largely repressed by a social and economic environment as hostile to the particular person sometimes as the human environment is generally to the present evolution of animal life, and as the lowest forms of present life on earth perhaps

were to the past first beginnings of life ; for then, as now, the stronger most likely fed on the weaker or crushed it out of life, leaving a gap in the development of life which experiment cannot yet fill ; and that the individual who, emerging out of the common ruck, rises to eminence owes his distinction largely to the more favourable surroundings in which fortune has placed him. How poor a chance has many a tender and tentative variation against a hard, narrow and fixed environment ! That is the frequent pity of it. Without doubt it would be quite easy to pick half a dozen persons at random out of a company of skilled mechanics, or for that matter out of an assembly of village ploughmen, whose heads and features denote greater natural capacity, although never developed in them, than could be found in the same number of judges or on a whole bench of bishops ; dignitaries not always raised to eminence for the eminent possession of superior abilities.

Having regard to the complexity of composition of the human germ, its innumerable constituent elements and the many possible atomic groupings or systems in the molecules, what need to wonder that genius is occasionally born of an ordinary stock or that a genius breeds only an ordinary product ? The extraordinary composition evidently requires the concentration in one person of good qualities which have been separately possessed by different branches of two stocks ;

and the chances of such a lucky concurrence of unknown and widely dispersed factors are incalculable. Here, if anywhere, is a long chapter of accidents and a very short chapter of knowledge. But to think of the rarity of logical thought and feeling in mortal minds ! As rare usually as sane and sage imagination. Not knowing how it comes to pass, knowing only that there is no individual merit in the matter, they nevertheless laud and admire genius as they do other qualities, like beauty, which cannot be acquired. Does the deeper logic of feeling then silently teach that it is a happy fulfilment of cosmic purpose, to be openly excused or silently condoned even when it makes its own morality ? If genius does great work the gratitude of a world which gets the abiding benefit of it may allow the morality of doings to pass away with the passing of individual relations. In no case, we may be sure, will nature fail in its equilibrating processes of being and becoming, of doing and undoing, to work moral and immoral material alike to its good. However that be, certain it is that two germs coming together in the chances of human composition may, like two chemical substances, be fitted to combine well or ill, or unfitted to combine at all—on the one hand may be so completely wanting in affinities as to be sterile, or on the other hand may have such apt affinities as to make the fine composition of genius ; or, again—a noteworthy fact—may unluckily have such

partially deficient affinities as just missing the best composition to issue in the eccentricity of insanity with a streak of genius or of genius with a streak of insanity. For notably thin is the partition between erratic specimens of one-facetted or wry-minded genius and some forms of insanity.

Noteworthy too is it, as memorable instances prove, that the special and complex compositions of elements in genius are sometimes so unstable in the individual case as easily to burst into explosions of insanity. A brain which is sensitive to new impressions and in travail to make the fit reactions, pulsating tentatively in new adaptations to the environment, must needs be less stable than the brain which, settled in fixed relations to its surroundings, like unprogressive ant or bee, is bluntly insensible to everything outside them. Craving new vital relations to a yet unrealized environment wherein it may gain and maintain a comfortable equilibrium, it is necessarily liable, when it is not strong and well-balanced, as large, whole and sane genius is, to disintegration. For it has oftentimes to struggle hard to develop its individuality and fulfil its special being against adverse circumstances, being either without the patient fortitude to adapt itself to circumstances or without the strength of character to adapt circumstances to it; one or the other of which alternatives is the necessary condition of a stable and comfortable mental equilibrium. Naturally the stability will be less

and the liability to overthrow greater when, as is often the case, the superior sensibility is that of the one-sided eccentric genius whose ill-balanced mental structure is the disproportionate growth of a single mental facet, not a sound, proportioned and stable whole.

Notwithstanding that the occurrence of genius in a family is not predictable, yet one may justly assume a good level of normal ability dispersed at random among the persons of the ancestral stock, although not hitherto educed particularly by favourable circumstances. The happy conjunction of qualities which has taken effect in the favoured individual could not otherwise well happen. That it is not transmitted to offspring is not surprising in view of the extraordinary concurrence of complementary qualities necessary to its production, of its frequent instability when not a complete and stable whole, and of the improbability that a similar goodly composition of complexities should be hit upon in the intermingling agitations of subsequent germinal unions. Not wholly unwarranted was the old saying, for it was the shrewd inference of common observation, that giants in mind, like giants in body, are commonly infertile. Nature, mindful of the species, careless of the single life, seems bent on a constant reversion to the average. What may perchance happen is that like as in families a remarkable reversion to the features and character of a particular ancestor occurs sometimes, so in a family

which has once produced a genius there shall be an occasional reversion to a similar rarity of nature. For if the occurrence of genius in a family is evidence of a general dispersion of good normal abilities among its past persons, another lucky, although somewhat different, conjunction of elements may chance to take place despite actual infertility or poor progeny of the particular genius.

Is the production of germ-tendencies or innate predispositions, when all is said, a matter of combination of germ-qualities only? May it not be also in some degree a question of the influence of the conditions under which the parental conjugation takes place; a question, that is, not of obviously material composition only but of the particular occasion and its circumstances, mental as well as physical? Hitherto the habit has been to think too coarsely of matter and its motions and vastly to underrate their swift and delicate subtilties. It might not be amiss to take account of the state of the body and mind of the agents during the reproductive act, and of their full sympathy or comparative apathy. For it is a function which is nowise uniform in force and quality, being now a performance of dull mechanical routine or mere brute-like sensuality, now a passionate transport of the whole natures of two beings merged into one for the moment: a sort of transient love-fusion of separate sexual natures which were originally undivided. And not now

so entirely divided as they seem, since there is some man in every woman and some woman in every man, and sometimes a great deal of the one in the other ; and obviously—*res ipsa loquitur*—a particular ancestral male quality is transmitted safely to offspring through the female in whom it cannot appear openly, as a particular female quality is transmitted through the male in whom the quality lurks latent.

After all, the transporting fusing of the love-passion, like some other transports, may be interpreted as a transient union with the primal energy of Nature, an intoxication or becoming one with the infinite, such as the enraptured poet or musician feels, and by which the religious ecstatic is divinely transported. Ecstasies of love, music, poetry and religion are without doubt subtilely physical and not separated from one another by discontinuity of being ; they hark back to something more true and deep than that which they are able formally to express ; and to think of one as more objective and physical and of another as quite subjective and mental, is just a bad consequence of the absurd duality of being so long mischievously made between mind and body. That being so, it is easy to suppose that differences of mood and circumstances at the reproductive juncture may affect the tone and quality of the germinal compound, reflecting in some mysterious way the rhythm of subtile interfusing moods and motions of

the agents. It is not possible to conceive the number of subtilely interacting energies liberated in the body during sexual orgasm, or to picture in mind the variety and complexity of the figures which the constituent atoms of the germinal union take in the mazes of their complex motions—intricate and intervolved, yet ever regular*—and their consequent constitutional issues; just as impossible in fact as it is yet to detect the extremely fine physico-chemical change of nerve element which underlies the dawn of love in the maiden's heart or the resignation and solace infused into the pious soul by prayer. Subtilizing our conceptions of things, it is not unimaginable that like as the least false note of function is something of a discord in the full harmony of the bodily symphony, so the quality and the circumstances of the reproductive act dynamically affect the tone and quality of the product.†

* As Milton says of the planets

Mazes intricate,
Eccentric, intervolved, yet regular
Then most when most irregular they seem.—

Paradise Lost.

† I may quote here an interesting sentence from Milton's *Doctrine and Discipline of Divorce*, who, as I have shown on former occasions, was a pronounced materialist—in the philosophical sense of that abused term. “There is a *hidden efficacy* of love and hatred in man as well as in other kinds, not moral *but natural*, which though not always in the choice, yet in *the success* of marriage will be most predominant.” The italics are mine.

The discoveries of radio-active substances having disclosed imaginable subtilties of matter and force unimaginable when it and its energies were pictured to mind in comparatively coarse material shape and motion, it is lawful and right to think generally of far finer motions at work in vital processes than was heretofore possible. An emotion moving out of the body is truly a subtle motion travelling in it, and its external work when it strikes a recipient mind is no less positively physical than the internal metabolic effects which it notably produces on bodily functions. Instead of thinking of mind as an abstract spiritual entity separate in nature from body, yet somehow mysteriously working on and worked on by it—the soul of the idiot of the same piece as that of the statesman, only badly housed—and prolonging futile disputations concerning the mutual relations of two essentially independent and unrelated beings, doomed to go along together in a pre-established harmony (marred it is true by frequent friction), through corresponding periods of growth, maturity and decay, it will be more to the purpose henceforth to make matter spiritual in the body, or, more properly speaking, to make material motion raised to its highest power one with so-called spiritual motion—to bring down the higher from its metaphysical height and to exalt the physics of the lower. In conceiving which ultimate identification it will be very necessary to form and grasp the clear and distinct

idea of the subtilized nerve-force styled mental being other and more than any yet familiar and tangible physical force, albeit in real continuity of being. It will contain in itself and witness to the environing mental influences or forces which, having been incorporated organically into the structure of the supreme cerebral organization, are thereafter discharged as its functions : a kind and mode of energy, in fact, so different from that which is yet objectively known and handled that by comparison it may be called etherial or spiritual.

The simple truth, so easy to say so hard to realize, is that man is a product and part of Nature and lives in, for and by it. As every cell of the body is a living part of it and cannot live separate from it, constantly acted on and reacting in the economy, so the individual mortal is part of the physical and social medium, acted on and reacting continually, lives only by virtue of it, cannot live separate from it. When he can no longer act and react it quietly sheds him and, leaflike, he falls and rots. Imbued with his keen sense of individuality and the pride of his pre-eminence in animate Nature, he is prone purblindly to overlook or wilfully to ignore the fact of his absolute dependence on the environing medium, albeit his religious instinct has always borne deep, though vague and varying, testimony to it under its different forms, symbols, myths, fables, ceremonies and creeds.

Not a function of the body has the independence which common language might seem to imply : to walk implies the ground to walk on, digestion implies matter from without to feed it, and respiration, although thought and spoken of as the function of the lungs, much as if it was their work only, is really a process in which the physical medium is just as essential a factor as any bodily agency concerned in it. There could be no function of each particular cell ministering to respiration if the oxygen from without was not carried bodily to it to perform its function in it. The superior nerve-cell ministering to the noblest thought of the finest mind owns a like absolute dependence ; and the noble thought is just the supreme evolution of Nature through man, who, thrilled with the joy of creative activity in him, glorifies and magnifies it mightily. It is his happy privilege to confer his own title of nobility, and his worship of humanity is a monstrous self-idolatry. As he thus thinks, feels and lives in strict correlation with external Nature, something of the outer world, received through the senses and perhaps imperceptibly also from outside their range, is contained in every function of the body, in every thought and feeling of its mental organization. He could not think the outer world if it were not only present *to* but *in* his thought.

Unity in the partial separation which individuality is, that is the basic fact. It is not man

who lives independently in Nature, it is Nature which lives in and through him and he who is a function of it: his individuality a particular offshoot which, dying when it is separated, is then reabsorbed. To set the individual being over against external Nature as something separate and self-existent, a metaphysical *subject* opposed to a physical *object*, so making a monstrous duality in life-long disunity and conflict with that in which and by which it actually breathes, moves and has its being, is to make an unnatural divorce between man and things in the supposed interest of his spirituality. Thereupon it is quite in keeping to picture the natural process of expiring mortality in every aspect of gloomy terror—as an event so repugnant to the sacred instincts of humanity that it cannot be the death it seems of so noble a creature, although the like event is the absolute death of all less noble creatures, can only be a caterpillar-like metamorphosis of mean into higher being somehow somewhere: the instinctive love of life, while life is, projected into an eternal life, when it is not.

A true conception of things may justly dissolve this violent divorce of man from Nature, teaching him that he owes all that he is to the Nature which brings him into being, maintains him in being, and finally, in the natural dissolution and evolution of things, takes him out of being. Thus soberly conceiving of himself he may apply his mind diligently to search out the laws of

Nature in order by faithful obedience to imbibe its spirit more and more and to merge into harmonious unity with it—observe the cosmic statutes to do them, that is—and thereupon grow by such instruction, such cerebral *in-struction* or literal *in-formation*, in organized intelligence and power as the supreme product and crown of its evolution.

V.

Reverting now to the genius-variation which, being the latest outshoot of the organic *conatus fiendi*, marks organic life raised to its highest power in mental organization, we can perceive that its pregnant nature, thrilled with the prophetic pulse of an unknown future, foretokens an increase of human relations with surrounding Nature through forefelt, even when not foreseen, adaptations. It may be compared to the so-called organic “mutation” from which a higher type of species is supposed to spring ; is perhaps fundamentally a product of the working of the same histological law raised to its highest power. Inevitably therefore in the man of genius is implicit something more than is consciously formulated in outward expression, a semi-conscious or subconscious susceptibility and intuition, silently absorbing and informing, of which he can give no explicit account consciously. He is greater sometimes in the irresponsible outflashes which he never de-

liberately purposed or foresaw, perhaps retrospectively rued, than in the sober calculations of reason. Out of feeling it is that impulses spring, and it is feeling which, infusing character, determines the quality of personal distinction. Tides of high feeling impel answering flashes of thought and outbursts of conduct, as common tides of feeling inspire common ideas and acts; and through fuller and finer feeling with its fitting expressions the aspiring nature aims and endeavours to become and fulfil its perfect self. To limit life in mind to its outcome in consciousness is much as if one were to limit life in a street to the light-range of a particular gas-lamp, or to think that the stars shine not because unseen in broad daylight.

Is it not the simple truth that to make a new start of evolution in a progressive world it is always necessary to violate the prevailing rules of reason—to re-form, that is, the formulated *ratio* or reason of things? The genius is in sympathy with his kind by that in him which is not genius, and out of sympathy with it by that which, being genius, seems irrational to the multitude. His likeness to them which they like he inherits; his unlikeness is a mutation which, being a breach of custom of the type, is repugnant and they dislike. But not therefore an unprofitable although possibly an unwelcome advent, for the world would soon be in a bad way if there were no better to-morrow to its truth of to-day.

The motive forces of the great human propulsions, religious, reformatory, revolutionary, spring not from reason but from feeling, whose current then sweeps resentful reason along, unwilling and vainly resisting at first but submissive afterwards, painfully to make its rational accommodations. Borne along by the stream, individuals move with it without noticing how fast it moves or even that it moves, perhaps imagining all the while that it is the bank which moves. Think how quickly and quietly a cause apparently weak and hopeless in face of a dense host of opposing reasons swells and swells in volume and flows irresistibly on, the hostile forces silently melting away when the underlying feeling is changed. Think again how impotent are the counsels of reason to check the torrent of folly when a vast wave of feeling surges through a crowd of persons or a whole people ; no more potent then to stay the mad rush than if addressed to the surge of a raging sea. Were men the predominantly rational creatures they pride themselves on being they might, looking back on the generations of them which have been and the sore evils done to one another and to other living creatures in their painful travail of development through the agonies of the ages, have long since resolved to leave off the propagation of their species. Far from picturing such an event, so great is their self-esteem that they eagerly crave knowledge rather than pray for oblivion of a past which has been what it has been ; nay, would, if

they could, gladly increase and multiply to fill not the whole earth only but every other planet with their kind, deeming the result a great and goodly gain to the universe.

It is because they are urged by an organic impulse deeper and more powerful than conscious motive that they are borne onwards in the mighty stream of being, and supplied with an unfailing fund of optimism which heartens them everywhere to go on being and becoming, and mercifully to ignore what they are and have been in the concrete. Nature, intent upon the continuance of the species, deals with the individual mortal much as it does with the procreating creature which is then insensible to mutilations, benumbing him to all but that which he immediately craves by so transporting and dissociating a particular tract or area—ecstatically dislocating it, so to speak—as to break its connections with all currents of thought, disagreeing, qualifying or inhibitory, from the surrounding cerebral areas. No wonder then that love has been deemed a divine kind of madness. How can there be reflection when a physical interruption of the normal paths of association renders impossible a reflection of the activity of the dismembered tract on to its related parts of the mental confederation? So it comes to pass that falling in love against the counsels of the head through faith in the deeper counsels of the heart, man is insistent to people “this sinful world” from “the miseries” of which he gives “heartly thanks” when a brother or a

sister is "delivered," praying in the same breath that the whole business may be brought to a speedy end. This again he devoutly does by virtue of a religious faith springing from an intuition of personal feeling to which, though it cannot well be worth more than the subject is worth, he ascribes a supreme kind of value far exceeding the formal conclusions of labouring reason. Thus are the humble exalted and the mighty brought low ; for the innocent is by simple faith of more value than the philosopher by deep thought, the witling perchance nearer the kingdom of heaven than the man of great wit.

As it is the rule of organic evolution to care little for the single creature, animal or human, every living thing having been furnished with a sufficiently strong instinct to care for self—the manifest concern of Nature being to preserve and continue the species, cost what that may in waste of separate lives—the individual mortal is just used for what he is worth, without regard to whether he is a complete instrument or not, and furnished with a sufficient conceit of himself not to underrate his value. The one-sided genius, the neurotic fanatic, the self-righteous egoist, the self-flattering philanthropist, the terrorizing anarchist, the insane revolutionist, alike with the fury of the storm, the raging of the sea, and the madness of peoples, work to fulfil its ends, which are certainly not solely human ends. Even the fool is made good use of for the instruction

and altruistic development of the species, and spasmodic outbursts of hysteria are fundamentally the morbid outcomes of social feeling. No such outbursts of delirious sentimentalities would occur were there no social atmosphere to stimulate and feed them. Individual life is not of value by itself ; it gains value only by its attachment to the life of a social whole, and larger value by its attachment to a larger social whole—to the family, to the particular social body, to the nation, to humanity in ascending series.

Nature is wise enough, however, not to upset the balance of sane life by permitting neurotic extremes to propagate their kind by hereditary transmission of disproportionate qualities ; the exaggerated egoism, whatever its line of growth, being a deformity or morbid hypertrophy which is apt in the following generation to issue in an antisocial type—criminal, idiotic, insane or otherwise degenerate—tending to extinction. Absence of order, harmony and proportion of thought and feeling in the mental structure of the parent is thus naturally apt to produce an innate predisposition to disorder in the offspring, or at all events in some of them, not necessarily in all. Even the sane genius is not granted the privilege of propagation and continuance of its exceptional self ; the rule of a steady return to the mean, enforcing a distribution of the accumulated capital, checks that hurt to the equilibrium of the species. Thus a sort of *vis medicatrix naturæ* works in the

social as in the bodily organism to restore the natural stability. Although it may be justly questioned whether a successful socialistic economy be possible in a world in which human nature is what it is, men not having yet given over feeding on one another and joined with one consent to feed one another, it must be owned that nature is distinctly socialistic.* Indeed, in the order of things it commonly deals hardly with the genius in his lifetime, ruthlessly martyring him who preaches doctrine too far in advance of its social state to agree with its comfort and stability ; itself moving forward either gradually by quiet process of evolution until it overtakes the martyr's mind and absorbs it, or by cataclysmal explosion in violent revolution when the strangling bonds of rigid convention yield not to the expansive forces of growth, heedless then what sacrifices it makes of individual lives.

Without doubt the Mendelian theory of here-

* Are the societies of industrious ants, as Milton imagined, perchance prophetic of that which some day is to be in the human sphere?

The parsimonious emmet, provident
Of future, in small room large heart enclosed ;
Pattern of just equality perhaps
Hereafter, joined in her popular tribes
Of commonalty.

—*Paradise Lost*, B. VII.

Possibly, but in that case possibly also an abolition of individuality and a reduction of human society to the unprogressive uniformity of bee-life and ant-life.

dity, according to which the different features of plants and animals are treated as so many separate units segregated in transmission and inherited independently of one another, has been an important and valuable biological conception, even if it should turn out that the prolonged and patient experiments on which it was founded be not, as Bateson declares, worthy to rank with those which laid the foundation of the Atomic laws of Chemistry.* For the first time it has done something to clarify our notions of heredity; and it may be expected to do much more to prove its worth in time to come when the diligent experimental researches which are now being patiently prosecuted according to its method bear full fruit. Thus far these researches have proved that in a large range of plants and animals physiological characters are treated as units in the divisions of the reproductive cells; so that when the product of a crossing of plants in which the characters are closely combined forms its reproductive cells, these characters are segregated, each germ-cell or so-called *gamete* carrying either one character or another, not both, and an equal number of each kind being formed. When in the process and its results one character is more potent and prevails, as often happens, it is called *dominant*, the other which recedes into the background being called *recessive*.

* "Mendel's Principles of Heredity." By W. Bateson, M.A., F.R.S.

The principle of the theory then is that two such different characters do not blend and individually disappear in the conjunction of the germ-cells, but are sorted out to their several places and stored separately to reappear in future reproduction ; carried bodily, it may be supposed, in the chromosomes or the imagined still more minute chromomeres of the nucleus ; for here, as elsewhere, scientific imagination, outrunning accurate observation and verification, is apt to become imaginative science. When new forms appear for the first time in hereditary transmission they are created by simple recombinations of characters derived from original parents ; and in like manner when on crossing plants a reversion takes place, *e.g.*, when two cultivated white-flowered plants exhibit the original wild purple flower, what happens is that two parted complementary colours which have been somehow separated by variation concur and gladly combine again. All this is easily imaginable in case of such simple character as tallness or shortness of pea-plants and blackness or whiteness of flowers and animals, where it is possible to define and handle a so-called unit-character ; but it must be anything but easy, indeed obviously impossible, to separate definitely such unit-characters in the manifold physiological features, mental and bodily, of a complete unity like the human body. There is yet no certain evidence that the transmission even of colour-characters in man follows the Mendelian rules as

it apparently does in the rabbit, the mouse, and the horse ; besides which, there is some reason to think that cases of blending in animals do actually occur.*

Whatever the ultimate value of these rules may prove to be, it would be unreasonable to expect yet to apply them to man, seeing how recent was the recognition of them and how numerous and various are the complications in the matter of so complex an organic being. A character which looks simple and suitable to be treated as a unit may not be simple at all—most likely is not—but subtly composite and dependent upon the intricate interactions of various factors separately or not transmitted in heredity. All the more reason to think so seeing that the particular colour even of rabbit or mouse seems not to be a simple factor but to depend on interaction between one distinct factor and another which are separately transmitted.

Evidently the special need now is of a systematic observation and exact record of the facts of human heredity in place of the vague and general statements hitherto put forth without the least profit. A painstaking and thorough investigation of the lineage of a single family and its adventures, accurate note being taken not of the cases only in which a particular transmission occurs and is

* An Address on Mendelian Heredity and its Application to Man. W. Bateson, M.A., F.R.S., *British Medical Journal*, July 14th, 1906.

patent to all the world, but also of the members of the family in which it is not manifest and of their several peculiarities and life-issues—that is a study which might do more to shed light on the facts of human heredity than all that has ever yet been vaguely written on the subject under the guise of information. How little is learnt by learning that one child of an insane parent becomes insane when the characters and fortunes of other children of the same parent who do not become insane are not traced! A transformation of morbid neuroses notoriously takes place through generations, the epilepsy of one generation being the insanity or idiocy of the next generation, and one form of insanity in the parent coming out as another form of insanity or perhaps as a form of crime in the offspring. It is again a positive fact of observation that side by side in the same family there shall be a person of distinguished talent or perhaps genius, and another who is a confirmed lunatic, or commits suicide, or is a hopeless cast-away. In like uncertain manner insanity or other allied nervous disorder occurs not in the following generation yet crops up in the third generation: an instance of hereditary continuity through apparent discontinuity. Incalculable are the combination-chances of germinal unions not only because of the number and variety of the factors and the exceeding complexity of the process, but because, as exact research after the Mendelian method gives reason to suspect, one factor not

itself demonstrably active may actually by its mere presence in the germ modify in unknown ways the action of another.

In this connection serious account ought obviously to be taken of the surroundings in which the particular person has grown and lived. A large and varied environment, affording the occasions of suitable adaptations and free developments to innate tendencies, may contribute to raise one brother to eminence when another of perhaps nearly equal natural capacity, enjoying no such advantages but doomed to live in a narrow and stifling mental environment, either vents his innate impulses only in anti-social irregularities or suffers a mental breakdown from their uniform suppression. The quality which would have been an excellence in propitious, becomes a cause of disorder in adverse, circumstances. It is nowise improbable that more than one inglorious Napoleon has ended his days on the scaffold.

Whether the faith which is now largely put in Mendelian rules of inheritance is fully justified, whether in fact we are to accept them as the rules of a true law, is a question to be answered positively by future researches. Certainly the ripe fruits of maturity will be invaluable if the hopes of a budding promise are fulfilled. Meanwhile the assumption to be made is that a definite unit-character is separable from the organic unity of every plant and animal ; that every disparted unit-character is transmitted independently in re-

production ; and that when all the constituent units of a particular organism have been thus separately treated the disintegrated organic unity somehow survives—at any rate in spirit—as a whole and reproduces its type. What then has become of the very principle of its being, the synthetic force of its unity, the *substantia una*, so to speak, of which its divested characters were the distinguishing attributes ? Swarms of the unit-characters of the two conjugating sexes are supposed to pour separately in equal numbers into the reproductive cell, only half of them to be used for the production of the destined organism ; intermingling there in fluctuating agitations they finally, by a suitable play of elective affinities, sort out and part off the proper number and characters to combine for its formation. Do the constituent elements always then really join together, well or ill, so far only as to be capable of subsequent separation ? Or do they ever blend somehow in an organic composition which absorbs and transforms their individuality, transmitting them perchance into something more rich and rare ?

Startling it certainly is to think that the human organism can be a mere aggregation of an innumerable multitude of unit-characters which are transmitted independently in heredity and may be separately treated, seeing that every part of it is physiologically in vital relationship with every other part, and that its specific life is the vital

outcome and expression of its specific unity. In face of the hard thought that characters which are thus organically dependent can be exactly analyzed and rightly studied as independent, one may still perhaps own that in the mysteries of a complex organism there is something more than a mere quasi-mechanical distribution and combination of characters can explain; although light-winged fancy might picture it as an immense, though unheard, harmony in which, as in a grand orchestra, each instrument is separate and makes its special contribution to the musical concord.

In the absence of all exact knowledge of the laws of heredity speculation concerning human perfectibility as well as human degeneracy are too hastily and confidently put forth. While men are always apt to believe that they are advancing they are always apt to suspect that they are deteriorating. Lamentations over human degeneracy are nowise new; they have been so frequent ever since the deplorable degeneracy of our first ancestor that the present wonder is that the race is still extant. Evidently some countervailing force of redemption must have wrought continuously through the ages, not once or twice cataclysmally, to preserve and, as the pleasing hope is, to improve it. It is certain that the occurrence of insane, vicious, or even criminal persons in a family does not necessarily signify such a degeneration of the family stock as shall end in progressive deterioration and ultimate extinction

of it. They are defects which, as before said, go along with instances of singular proficiences in other members of the same family. That is a fact not only demonstrated by general observation exhaustive enough to include the history of the generations of such a family, but in happy accord with Mendelian principles of heredity, which show that it is quite possible, two pure germs meeting in fertilization, to breed a pure character from a stock in which there is an impure strain, or by selective interbreeding to add a required quality to the product. Were it only possible, in accordance with such principles of segregation of characters, to treat sanity and insanity, or morality and immorality, as unit-characters, one dominant and the other recessive, the optimistic breeder might set joyfully to work to breed a strain of pure sanity or pure morality, getting such help as he could from the constant tendency of nature to preserve stability of the species by a return to the average, which unfortunately is not yet perfectly sane nor moral.

When all is said, nature has its due compensations and works out its ends inexorably in its own steady way, supremely regardless of mortal fates. The exultations of those who shout with joy in the procession and the outcries and protests of those who are crushed in it, are alike notes in its immense orchestra. The genius is a present value to the species and is used for all he is worth : what matters it if in the chances of his

production there are several inevitable mischances? The good which he represents in the family stock from which he proceeds, and the evil which his less fortunate kin disclose, alike tend in the order of reproductive events to fall back to the mean of the species. Meanwhile the species profits by the impulse of his work and the family eventually rights itself or, if not, suffers a natural decay and extinction. It is a bold conceit that man can yet interfere successfully in the complicated business and prescribe strict rules of good breeding whereby the genius shall be reproduced generation after generation, and the anti-social being eliminated from the social economy.

VI.

Experimental results of a course of selective breeding to produce perfect men and women might not fail gravely to disappoint optimistic expectation, even if a common standard of perfection were agreed upon; which might not be easy among so many different human types, each thinking itself the best. In the long run it is perhaps better for the species that there is here and there a family stock of such constitutional instability and tendency to variation, even though variation fated to go astray, than it would be for every stock to rest in the stable equilibrium of a set adaptation to its surroundings, bee-like in

busy or sheep-like in placid routine of automatic existence.

Mankind are for the most part short-sighted mentally and indolently shirk the pains to improve their sight ; they seldom look backwards beyond a link in the chain of causation, or forwards beyond a link or two in the sequence of events. That which they, innately prejudiced by the universal bias of human egotism—every one, too, in particular by his high-priced self-valuation—think evil from their standpoint is just as natural and necessary, as righteous altogether, in the concatenation of things and their eternal evolutions and dissolutions as that which they think good, being no more at worst than the disorder which is new order to be ; and it is not yet proved, although implicitly assumed or openly asserted, that mortal perfection is a more likely end of humanity on earth than extinctive degeneracy. “Progress onward and upward for ever,” a pleasing phrase of bigger sound than sense, shows more like a delirious vision of ecstatic imagination than the inference of sober reason, when the dazzling picture is rationally faced. So far from being a scientific certainty, the notion contradicts the morphological law of the fixed constitution of the physiological type of organism. No process of natural evolution stretched to its utmost would suffice, the human body being constituted as it is, to make even a remote step towards the fulfilment of that irrational expectation. Man, being

neither angel nor animal, goes the wrong way to work when he either aspires to be the one or sinks to be the other.

Nevertheless an unlimited perfectibility of the human species is the sentimental hope of those who, taking no serious notice of facts but gladly turning wishes into beliefs and counting the belief more spiritual the more narrow it is and the more fervent its inflaming desire, dream a sometime realization of hope's ideal. It is no doubt good to cherish a splendid ideal, even though it be an ideal less fantastically sublime than perfection. The pity of it is that as men cannot either live the ideal in present life when everybody would be perfectly good and enjoy perfect truth and happiness, or live without an ideal when there would be no longing for ideal truth and unattainable happiness, they are tossed to and fro in turmoil of restless agitation. Instinct with the organic nusus of life to maintain and increase itself, they crave for more and fuller life, counting the insatiable lust of life a virtue, and scorning the pessimist as a decadent creature who, having no sense of the transcendent nobility of mankind, may properly be shed by the healthy and vigorous growth of its perfecting progress. Meanwhile they take good care not to descend from the pleasing nurture of glorious abstractions and lambent emotion to close appreciation of the not altogether glorious concrete beings, themselves perhaps included, who actually constitute humanity.

When, if ever, the lust of life grows weak in the race, as it notably is in the suicidal family, it will not mightily concern itself about its ending. And it is not impossible that some day there may be a sad satiety of life.

In one form or another under all sorts of religious symbols, emblems, rites, forms and ceremonies, equally revered while they thrive in their season and equally despised when their season is over, the underlying creed and strain of progress are absorption of the individual into the kind and the growth thereof by such sustenance. The progressive carnifications of the animal world are raised to the progressive social organizations of the human world. By virtue of that principle of progress, implicit or explicit, the species expects its continuance and progress, counting that religion the best which has the highest social aspiration. In the lower animals the welfare of the species is accomplished blindly by the destruction of the unfit and the survival of the fit ; in the human species self-denial and self-renunciation, even large self-sacrifice, conscious or unconscious, voluntary or enforced, by subordination of self-regarding impulses to the common weal of the social body, is the necessary condition and ordained lesson of the building of a complex organism ; the good of the predominant species on earth, at what cost soever of pain and death to inferior species, the selfish aim of individual unselfishness : such the social root of the evolved moral law.

Whether or not the moral law is so ineffably sublime as, like the aspect of the starry heavens, rightly to throw the philosopher into an ecstasy of admiration—albeit such selfish love of the human kind might not look so admirable from the standpoint of a lower animal world ruthlessly sacrificed to its uses—it is a law ruling inevitably in a social evolution which could no more have been and continue to be without it than the universe could hold together without the law of gravitation. Its imperative code commanding the acts which “thou shalt” do as lawful and right and forbidding the acts which “thou shalt not” do as unlawful and wrong, emerged naturally and necessarily into conscious cognition as the formulated induction of experience in the social progress of the race. Men did not begin to live together in society because they were social beings and foresaw the advantages, still less because of a transcendental spark of moral intuition anticipating experience; they became social beings by living together and finding their profit therein. The unconscious *conatus progrediendi* in the organic world became in due course the conscious *conatus progrediendi* in them; wherefore in the make of man now is a conscious working for righteousness which was not in him when he was first made.

As it is the unquestionable law of social life, dimly felt or clearly discerned by seers in divers times and places, that good actions bring

good and bad actions evil, not of course manifestly and directly to the individual doer but directly or indirectly to the social body, there is no need now for anyone to put himself into an ecstatic or metaphysical transport in order to discover the laws of morality in the heavens, saying over and over again with wearisome iteration what has been said before and all that ever can be said from such ethereal altitudes. Morality owns no immaculate conception ; its experimental foundations are laid concretely on earth and can be laid open in detail by exposition of the positive stages of human progress.

The history of that long progress from repulsive savagery to decent humanity, from animality to rationality, is conclusive proof that, being originally and fundamentally predatory animals, men gradually perceived the necessity of enacting various systems of laws, statutes and ordinances, and of setting up suitable judicial authorities to prevent ruthless preying on one another ; and they still acknowledge the need of, however imperfectly they put in practice, successive amendments and additions to law in order to check and control the more subtle outcomes of the predatory spirit which stealthily and poisonously infiltrates the increasing complexities of an advancing civilization. Thus by degrees they have evolved out of experience of pains and penalties, of approbations and awards, of praise and blame, a series of corresponding consciences ; for there is not, as

it is the unthinking habit to say, one absolute conscience, authoritative and infallible, there are many and varying consciences.

What is the fundamental principle of the building up of a social structure ? Mark well what passions are fitted to promote or hinder the common weal : foster, praise and flatter those that conduce thereto ; check, blame and repress those that are hurtful. By that rule the special conscience has been gradually fashioned, or at all events much helped to be fashioned ; for it is most certain that laws and customs work effectually to breed consciences. Custom-consciencs are notoriously many times more potent in practice than an abstract moral conscience, which is apt to be asleep when it should be alert, or to doze in abstract serenity when it should be active in concrete doing ; have indeed in the past notably done more to actuate present conduct than distant hopes of heaven or fears of hell, even when such hopes and fears possessed a reality which they have not now that the theological dogmas concerning them are being quietly relegated to the museum of obsolete religious beliefs.

The many obsolete myths, fables, symbols, superstitions, rites and ceremonies which have come and gone in the long travail of man through the ages, many of them so grossly irrational and cruelly oppressive as infinitely to amaze how men ever invented them, and perhaps still more how

they ever endured them, had without doubt their reason and use of being ; they were in their day the natural and necessary aids and means to incite, sanction, sustain and further the social stability and progress of the race. As also just as necessarily were the persecutions and oppressions, the wars, tortures and cruelties, all the unspeakable sufferings, physical and mental, which, naturally occasioned by them, constitute so large and dismal a part of human history. One after another they have died their natural deaths with the progress of humanization which advancing civilization signifies. Hell with its rebellious monarch and everlasting torments, once so useful in Christendom as a terror to turn the wicked man away from his wickedness, is banished to decent oblivion as rationally incredible by those who, nevertheless, when directly challenged believe they believe it as an article of religious faith. The intuition of faith is a voucher of truth in them transcending the lame conclusions of reason, enjoining on reason the pious duty of deliberately debasing itself, justifying solemn belief in the utmost imaginable unreason. The more incredible the thing is rationally the more surely I believe it as an article of faith, such is the reverent attitude of abject religious devotion.*

* Faithfully obey, as the Jesuits are commanded to obey, among other rules, this rule—"They must abandon all judgment of their own, be always ready to obey the Church of Rome, and believe that black is white, and white is black, if

Strange that a mind in such absolute disunity of being, so clean divided against itself, can think to preserve its intellectual and moral sincerity, and stranger the wonder if it ever can. Heaven itself again as a motive to well-doing has become a hazy aspiration unto eternal happiness somehow somewhere, rather than, as once, a house of many mansions resounding with immortal praise and fulsome adulation.

As mankind grow in working intercourse and complexity of intervolved relations they are by natural law of social organization inevitably

"she says it; they ought to regard the command of their "superior as that of God himself, and submit to his government as though they were machines, or an old man's staff, to "be moved at pleasure."—*Exercita spiritualia Ign. Loyola.*

The quotation is second hand, but no doubt accurate. By early and continued organic fashioning and constant subjection to an order of set impressions and influences, with resolute exclusion of disagreeing impressions, the habit of thought and feeling reinforced regularly by apt ceremonies and offices, a human being may be so moulded organically as devoutly and sincerely to become such a machine of automatic thought, feeling and conduct. Did not Cardinal Newman painfully and persistently strive so to fashion himself—perhaps not with the full success he wished—declaring that if a doubt arose it was not to be entertained for an instant, that to pursue it even by a moment's reflection was not to be a good Catholic? "Either the Catholic religion," he says, "is verily the coming of the unseen world into this, or there is nothing positive, nothing dogmatic, nothing real in our notions as to whence we come and whither we go." He was unable to believe and openly profess a creed and at the same time tacitly to count its cardinal dogmas to be myths and symbols.

permeated more deeply and intimately by the spirit of the social hive—co-operation or working together begetting consequent consentience or feeling together, and consentience of feeling crystallizing into conscious thinking together—perceive themselves more and more clearly to be vital elements of a social body in which and by which and for which they live, and feel, if not that it is more blessed to give than to receive, at any rate a comfort and peace of mind in doing its service.* An emotion of solidarity blends naturally with the joy of personal being, so promoting a richer individual development under the chastening control of a larger and more complex containing life. That is to say, when the service is the true service of humanity, not when, as it may be, it is the service of a clique, sect, union, corporation of persons, the selfish interest of which is insensible to the welfare of the whole body ; for corporate or sectarian feeling operates to do wrong and approve its wrongdoings quite as readily as to do right. Not the least urgent need at the present stage of social development is the moralization of social

* *Synergy, sympathy, syntony, synthesis* : it is notable how a number of men co-operating to do some work by joint and simultaneous efforts fall naturally into rhythmic action and often instinctively shout or sing together. In this case the synthesis or conscious thinking appertains to the overseer who, by virtue of previous experience and formulated knowledge, plans, sets in motion and directs the mechanical performance.

combinations ; for while individual persons are seldom without some altruistic feeling, corporate unions are many times entirely destitute of conscience.

Impartial survey of things from the outside in a spirit of detachment might suggest a disturbing doubt whether the modern state whose eagerly pursued ideal is the greed of wealth by unlimited increase of trade and whose jubilation mounts with the mounting figures of trade-increase and population — as if to multiply men and their means of subsistence, however poor, were unquestionable virtue and wisdom—will have the courage to devise and inflict such effective penalties on individual and corporate wrongdoings as shall in time breed an answering salutary conscience. In view of the common infirmities of human nature, the subtle tendencies to craft inherent in trade, the pressing temptations to fraud incident to the keen struggles of competition, and the inevitable debasement of character produced by the passionate pursuit of a low money-getting ideal, it is not quite certain that there will be such a resolute search for and stern application of effective remedies as shall suffice to keep sound the health of the commonwealth. The stealthy risk is that the poisonous infiltration of corruption may insensibly vitiate the moral sense of the community, which, while still lauding purity in the general and so keeping up a fair front of virtue, shall then, content with the pleas-

ing denunciation, silently condone successful fraud ; too easily shrinking from sincerely seeing and telling how virtue actually fares in the particular. Certain it is that the subtle scoundrelism which craftily despoils hundreds of persons by vile commercial fraud, without the least regard to the desolation caused, does not meet with the reprobation and stern punishment which in old times were meted out swiftly to the ruder work of the open highwaymen.

Here I may note by the way, in hope to provoke insight and enquiry into an overlooked aspect of things, that not an organism nor an organ of an organism but has observed the fundamental law of social organization in evolution from its primal self-regarding elements, from the simple cell intent to maintain and multiply itself to the diverse cells in the complex multicellular organism, and observes it now in the preservation of its vital unity and sound performance of its functions. The life of the organism is fundamentally the life of the cell, and self-interest the fundamental motive of cell-life, as of every life. What then must needs happen in the struggle of life amidst the diversities of circumstances ? The fundamental motive is necessarily modified in expression by the conditions of the organic environment in which the cell is adapted structurally and performs its function ; it cannot live all to itself, it must have adaptive regard to the other selves in the whole of which it forms a part,

and to whose welfare it is subordinate. So it is modified in form and made altruistic in function.

Now once an organ is formed and in full function by multiplication and modification of cells, it may, I think, justly be argued that there is a special rhythm or tone—an animal spirit, so to speak fancifully in old fashion—emanating from the composition and interworkings of its constituents which is communicated to the organic whole. Not otherwise than as in the higher domain of mental organization there emanates from the combination of a definite group of associated ideas and interests a special answering tone of feeling, its fitting emotional rhythm or exhalation: a purely organic result which the metaphysician apparently finds it impossible to comprehend or conceive. Good or bad naturally in such case: on the one hand, the admirable corporate spirit of the soldier who is ready to lay down his life in the service of his country; on the other hand, the mean corporate spirit of the particular trade which, greedy only of its own gains, sanctions a special system of elaborate fraud as a legitimate custom and accepts it gladly.

Having risen into clear consciousness in the mind of man, the fundamental organic process has acquired a dignity which ignores, even resents, the memory of its lowly origin. The sanguine mind may perhaps, without undue optimism, look forward to a clear and distinct understanding some day that all which goes on con-

sciously as human intelligence has gone on and goes on continuously by organic process in external nature ; that the work done internally in mental organization is actually done organically and unconsciously, consciousness only revealing partially the process and more fully the results ; and that the intelligent operations and effects shown throughout nature, especially by bees, ants and some other creatures, are not essentially altered in nature by having the light of consciousness thrown on them and being translated from instinct into intelligence. It would be improper, no doubt, to project the fully conscious and actively adaptive intelligence of man into their specialized and limited operations ; that would be to find the higher in the lower. But it is quite proper to perceive the foundation and processes of the lower in the higher—to discover in the conscious intelligence of man the working on a higher plane of the same organic processes which have with effortless ease constructed the marvellous ingenuities of mechanism seen in the structures of plants and animals, anticipating therein many inventions which he has consciously made and many others which he yet hopes and strives to make* ; which have fashioned their several instincts in the lower

* Not that some of these elaborate mechanisms might not apparently have been much simplified. It certainly looks as if nature had proceeded experimentally through failures and successes to reach its end, sometimes in circuitous and clumsy ways.

animals and the instincts of the human baby ; and which still regularly fashion in man the automatism by which so much of his daily work is done, and without which he would be occupied all his life in learning over and over again to do and in doing with deliberate effort that which he thinks, feels and does in a short time with automatic ease and intelligence. Great will be the gain when those who write so fluently and learnedly about mind in the multitudes of magazines and books prodigally published and forgotten month after month and year after year apprehend precisely what reason means organically and are at the pains scrupulously to define what they mean by mental.

It might seem strange, were any inconsistency in the ordinary thinking of men at all strange, that while they cannot sufficiently admire and laud the infinite varieties of the forms and colours of flowers, of the songs and plumages of birds, of the shapes and motions of animals, and all the exquisitely delicate and complicated ingenuities of architectural structure and beauty which these imply, placidly content to attribute them to natural organic processes, they cannot conceive an equally natural organic process to be capable of fashioning the mental organization of an idiot or an Andaman islander, howbeit just skilful enough to fashion that of a monkey. Organic action is able obviously and easily to fabricate all the beauty and mechanism of external nature and the intelli-

gence of the animal world, yet is unable to produce the glitter and artifice of a neurotic poet's imagery !

VII.

In the ascent of the human species to a higher plane of social organization by the development of nature through and by it are we henceforth bound to think that the acquisitions of the individual being do not count in the process of hereditary transmission, counting only in the contributions, good or bad, which he makes while alive to the good or bad work of the society in which he lives : that how righteous or unrighteous soever, he bequeaths no acquired constitutional legacy to his children or his children's children ; affects not their nature in the least ; does nothing by his doings to lay well or ill the foundations of their doings ? Without doubt the general qualities of the stock are more deep-laid and stable than the particular characters of individual parents, and are more plainly inherited. Not only are these less likely to be inherited, but they are sometimes plainly not transmitted when not acquired. It is natural then to think that acquired characters are still less likely to be transmitted ; and if that be so the procreating person is freed from reproductive responsibility so far as he personally improves or debases his nature, and can comfortably leave matters to the " universal plan "

whose concern it is to provide for the welfare and development of the species. Perhaps, after all, the responsibility of the individual mortal either to the species or to himself is not really so great as he is commonly apt to imagine ; drifting helplessly or struggling strenuously amid the tiny splashes he makes he is borne along in the stream of being from everlasting to everlasting ; nay, there sometimes perchance leaps up an evanescent flash of feeling that he is what he was predestined from all eternity to be, and could not have been otherwise.

Before yielding full consent to the doctrine that the person who consistently develops or debases his nature by a life of virtuous or vicious actions does not in the least affect the constitutional inclinations of his offspring, it will be well to note and weigh such observations and reflections as point to a different and perhaps more acceptable conclusion. Pertinent facts there are to suggest, although not sufficient to prove, that the parent who is engrossed in the exclusive development of a particular strain of character, other qualities being starved thereby, is not unlikely to engender insanity or other degeneration in his offspring by transmitting a heritage of constitutional defect or instability to issue badly in the circumstances of life. Cultivated hypocrisy of thought and conduct, habitual deceit and self-deception, constant insincerity to facts and selfish absorption in egoistic aims and work, passionate

self-love glorifying itself in guise of virtuous zeal, fanatical fury of feeling with its accompanying disproportion of thought and intensely self-righteous conceit—these and the like inordinate overgrowths of an inclination of character are unsound trainings or deformities of mind which, marking a fundamental lack of sincere, whole and wholesome relations with realities, are calculated to breed an innate want of balance and incapacity of true adaptation in the offspring. It would be strange if it were not so. Order, proportion and harmony bespeak a sound, stable and melodious structure of mind; ecstasies and excesses are distortions or discords. Not that the subjects of them are therefore without their uses; they are used for what they are worth, nature making the necessary compensations; but the chances are that they breed badly, for the fanatic of any sort seldom proves a good sire.

A natural consequence of their disproportion of mental structure and its accompanying keen self-conceit and self-righteousness, whereby they honestly see only what they wish to see and ignore what agrees not with preconceiving desire, is that they despise as wickedly blind, or slander as fools, hypocrites, cowards or liars those who differ from or oppose them. Absolutely contradictory evidence is met by multiplied asseverations, sober refutation by louder reiterations; for they cannot see that a lie is none the less a lie because it is reiterated ten times with tenfold

vehemence. On the contrary, they believe every angrier repetition to be an added proof of what they believe and an added condemnation of the wickedness or wilful blindness of those who do not agree with them. Outdoing the famous company which in jubilant procession marched round and shouted down the walls of Jericho, they think to build up the walls of truth by much shouting. Moreover, the lie which serves their cause is no lie, or at any rate, being justified by its end and polished to its purpose, is essentially a virtuous lie. It is not such quality of character that bespeaks a sound mental constitution or promises well for the mental constitution of offspring. It is he who owns a saner constitution, a better ballasted judgment, well-tempered feeling, and pursues a wiser conduct of life : who lives a pure life, does what is right, and speaks the truth from his heart ; practises no deceit nor slanders or otherwise wrongs his neighbour ; does not set himself up in his own conceit but is lowly in his own eyes ; performs that which he promises, though to his own hindrance—he it is who, doing these things, shall not fall, nor, one may perhaps add, leave bad seed behind him.* For as he who lacks the inward strength, proportion and wholeness of mind to adapt to himself or to adapt himself to the circumstances of life in which fate or fortune has placed him inherits

* Psalm xv.

the fault from his ancestral stock which has somehow and sometime acquired it, so it is not unreasonable, perhaps yet justifiable, to think that the errors and evil doings of the fathers are visited upon the natures of the children, and that the good man, continuing with his seed, leaves an organic inheritance to his children's children by his own welldoings.



SHAKSPEARE:

"TESTIMONIED IN HIS OWN BRINGINGSFORTH"*

"Let him be but testimonied in his own bringingsforth, the very stream of his life and the business he helmed."

—*Measure for Measure.*

1. *His Life and Genius.*

It is hard to echo the sorrowful plaints of those who lament the little that is known of Shakspeare's private life, harder still to sympathize with their fanciful conjectures when, naïvely measuring his thoughts and feelings by those which they imagine they would have had, and him therefore to have had, in his circumstances, they go on to accumulate idle surmises how he must have thought and felt and spoken, he being Shakspeare and they what they are. We cannot,

* This essay contains the result of a study of Shakspeare's works during a voyage to Australia and back four years ago. It marks the simple endeavour by impartial enquiry to understand and, if perchance successful, render intelligible what he was as "testimonied in his own bringingsforth." One hundred copies were printed at the time, and nearly all distributed privately.

it is true, tell exactly what he ate and drank, at what o'clock he went to bed, what sort of gartered hose he liked best, how many lines of verse he composed at a sitting, in what terms of affection he wrote to his wife at Stratford, if he wrote to her at all, and the like petty particulars which build the bulky masses of present biographies and autobiographies—the real facts striking to the quick and betraying essential character, if not liked, being scrupulously disguised or unscrupulously ignored—but we know the principal events and chief aim of his career and the spirit in which he pursued it ; and such history, rightly read, is the disclosure of character. Moreover, his plays and poems contain ample record of his thoughts and feelings concerning men and things. Why crave to know such trivial details, much like the sorry details of any other life—and better not known—which admiring affection minutely records, or itching curiosity, prying through key-holes, delights to discover and disclose ?

Instructive it no doubt would be to possess a full and exact genealogy of the family stock from which he sprang, and thus from the heritage of ancestral qualities, good or bad, and their complexities of composition in marriages, to endeavour to trace and exhibit the general qualities of his character as an ordinary man. For assuredly he, like every other mortal, proceeded by rigorous laws of descent and development from an ancestral line of beings and testified to his stock ; was what

he was, they being what they were, and could not have been otherwise. That it was not a poor stock, but pregnant with native vigour, is proved by the splendid fruit which it bore when, by a happy conspiracy of circumstances, a slip of it lighted on very favourable conditions of growth, albeit after that supreme effort the exhausted stock drooped and died. But such information, even if we had it in fairly good shape, would at best be but general ; it would not help us in the least to understand the origin of the extraordinary qualities as a man of genius possessed by him yet not possessed by his brothers born and bred in the same circumstances, nor by his children in the next generation. To understand how such special and unique endowments came about, it would be necessary to find out many hidden things—to wit, the various physiological impressions affecting silently the informing processes of the particular parental germs, and the subtilties and complexities of their compositions in reproductive union, which are yet quite unknown ; the many fine, yet most subtle-potent impressions made by varying bodily states and mental moods of the parents upon the intense rapid and complex motions of the many million constituent atoms of the combining germs at the reproductive crisis ; and the subsequent influences of the mother's moods of body and mind upon the intra-uterine processes of embryonic development. As long as these things are mysteries, so long will speculations be futile

and the expositions of them words void of meaning. The man of genius may not be begotten under a specially auspicious star or conjunction of stars, but he is undoubtedly conceived at a lucky moment and from a lucky conspiracy of co-operating conditions.

Born on April 23, 1564, William Shakspeare was the eldest son of John Shakspeare of Stratford-on-Avon, a well-to-do tradesman, who married in 1557 Mary Arden, the daughter of a substantial yeoman, from whom she inherited a small estate called Asbies, consisting of a house and sixty acres of arable land. This land she seems to have farmed herself until her marriage to the Stratford tradesman, with whom she may previously have had dealings in the sale of wool and other farm produce.

Possessed of this property by his marriage, John Shakspeare entered on the business of a farmer, selling his own grain and wool, and probably killing some of his fat stock and selling the meat at Stratford. At that time, indeed, to a much later date, such mixed business was no unusual thing in country districts; and the circumstances may explain why he has been differently spoken of as a glover, a wool-merchant, a butcher. He had a large family of ten children, but as some of them died young not more than five alive at the same time. At first his affairs prospered; he was alderman, high bailiff, and in 1571 chief alderman of the borough. But his

prosperity did not endure ; business went badly with him after a time, and gradually from bad to worse. In 1577-8, when his son William was thirteen years old, he was taxed to pay only half what other aldermen paid, and in November of that year he was exempted from any payment, having no goods to distrain on. In the same year he mortgaged his wife's inheritance to Edmund Lambert, to whom then also he became indebted for five pounds borrowed on security, and in 1592 he was prosecuted as a recusant for not going once a month to the Parish Church, presumably because of debt and fear of process.

The story of his father's failure points to a fault of character in him which the son happily did not inherit directly. Like many other eminent men he doubtless owed much to his mother's part in him, either directly or intermediately through fortunate compositions or neutralizations of qualities in the combining parental germs. It was she probably who endowed him with the rich affective qualities of his nature, his sympathetic feeling and imagination, whereby he became the great poet he was. In whichever line, paternal or maternal, fault or virtue was ingraft, certain it is that he, like every great genius, was the brilliant blossoming of a modest line of obscure ancestors, whose sober thought and feeling, silently stored, now emerging from the dark, came to light and life in him. In them—in whom, so to speak, he

lived before he was born—was stored the latent energy which, reincarnate in him, was actualized in his life. For assuredly the instincts and aptitudes of genius import a fund of unconscious ancestral acquisition silently accumulated which, working subconsciously in the individual mind, it knows not why nor how, arrives at conscious inflorescence there. Such basis of justification is there at the bottom of theories of successive reincarnations and of the ceremonial worship of ancestors.

Educated at the Free Grammar School of Stratford, he there learnt writing, arithmetic, "a little Latin and less Greek." The qualifications required for admission were to be resident in the town, seven years old, and able to read. Seeing that he was only thirteen years old when his father was in debt, paid no taxes, and mortgaged his wife's inheritance, it is pretty certain that he left school when he was comparatively young, either to assist in his father's business or to be put to some other occupation. The Parish Clerk of Stratford, who was then eighty years old, said (in 1693) that he was apprenticed to a butcher and ran away from his master to London. That was the tradition in his native town; and as it is not contrary to any evidence, and is moreover inherently probable, it is, in the absence of any reason to doubt it, foolish to try to discredit it only because ardent adorers, tuning belief to liking, dislike to believe that Shakspeare was ever

so humbly employed.* Another conjecture is that he was employed in an attorney's office, for it was possibly at Shakspeare that the angry snarl of Thomas Nash in 1589 was aimed when he sneered at those who leave the trade of *Noverint* (the technical beginning of a bond) and busy themselves with the endeavours of art. If that were so, his work in the office might account for the easy use which he freely makes of legal technical terms in his plays.† After all, he most likely had more places than one between leaving

* If there is no positive evidence either for or against a traditional story, it is not to be forthwith rejected as false. When nothing certain is known of the circumstances of its origin and growth, its mere existence, although worth very little as proof, is, after all, the only evidence there is—evidence, at any rate, of what somebody thought probable and others easily believed. An anecdote may be essentially true although not circumstantially accurate; and many absurdities of human thought, custom and action in all parts of the earth demonstrate the vital fixity of tradition from generation to generation.

† Not that he possessed so accurate a knowledge of law as the indiscriminating commentator somewhat rashly proclaims when he speaks of his “minute and undeviating accuracy” in his references to legal matters. He was sometimes wrong in his law as he was wrong in his chronology, wrong in his geography, wrong in his history, wrong in his physiology, wrong in his medical psychology, wrong in various details of his comprehensive expositions. Wrong in details, no doubt, but true to the principles and essences of men and of things. He knew how to make wrong details teach more truth than heaps of right details by prosaic writers can ever teach.

Stratford and leaving school, and may therefore have been both butcher's boy and attorney's office-boy.

All the more probable, seeing that he was not a tame-spirited boy who always behaved quietly and never got into mischief ; like that of most boys, his conduct was wild and unruly sometimes. Two undeniable events of his youthful life are certainly significant. He was prosecuted and punished for deer-poaching in Charlecote Park, and is said to have retaliated by a lampoon fixed to the gates of its owner, Sir Thomas Lucy, whom, later in life, he rudely and vindictively caricatured as Justice Shallow ; after which, to avoid further pains and penalties, as alleged, he hastily left Stratford. Before that, however, he had plunged into a more serious trouble from which he could not quite run away ; he had married Anne Hathaway, a woman eight years older than himself, when he was not yet nineteen years old, apparently forced to so early and imprudent a marriage by the unlucky consequence of an out-blaze of youthful passion. The marriage took place on November 25, 1582, and his first child was baptised six months after, on May 6, 1583. As he had two more children (twins) before he was twenty-one years old, there were no doubt good reasons, besides probably the spur of an instinct to gain a fuller life—"as one that leaves a shallow plash to plunge him in

the deep"—for seeking his fortune elsewhere ; which he did in 1585 or 1586.*

Remembrance in mature age of the bitter fruits of his own indiscretions in the flush of turbulent youth might well put real feeling into the protests against the reckless behaviour of "boiled brains of nineteen" which the Old Shepherd makes in *Winter's Tale*.

I would there was no age between sixteen and three-and-twenty, or that youth would sleep out the rest ; for there is nothing in the between but getting wenches with child, wronging the ancients, stealing, fighting.

That "between" is no long space within a length of life, yet many an one safe in haven at the close of life's toil and turmoil, looking back in reflective survey of his course—its haps and mishaps, its checks and chances—might see good reason to bless and praise the kind fortune which then frustrated a folly, cancelled an error, contrived the right turn or the happy accident

* Either observation or experience had certainly impressed him deeply with the sequent miseries of a forced marriage—

For what is wedlock forcéd but a hell,
An age of discord and continual strife?—

Henry VI., Act v., Scene v.

Again, *Merry Wives of Windsor*, Act v., Scene v., Fenton speaking :—

"You would have married her most shamefully where there was no proportion held in love . . . therein she doth evitate a thousand irreligious cursed hours which forced marriage would have brought upon her."

at a critical moment, rescued from peril recklessly provoked : in the mysterious fate of things

Fortune brings in some boats that are not steer'd.

That his wife and children whom he left behind him at Stratford must have been dependent on her relations for support is pretty certain, seeing that he was not at first in a position to maintain them, as he no doubt did so soon as he began to prosper. The supposition is perhaps confirmed by two curious facts : first, that the only mention made of his wife after her marriage is as having borrowed 40s. from Thomas Whittington, who had been her father's shepherd, payment of which his executors, after his death in 1601, had to enforce from the poet ; secondly, that his daughter Judith (twin sister of his son Hammeth), born in 1585, attested the signature of a deed of conveyance in 1611 by her mark, whereas his eldest child Susannah wrote a firm and vigorous hand and was said to be "witty above her sex." For one reason or another, at any rate, the one had been taught to write, the other apparently had not.

The eager haste of enthusiastic admirers to discredit the stories of his youthful indiscretions savours of uninstructed feeling rather than of instructed understanding : they would have a divine poet to have been a divine boy, and thenceforth divine in all his doings, which is absurd. One may say, as Plutarch reports Themistocles to have once said, "A ragged colt

ofttimes proves a good horse, especially if he be well ridden and broken, as he should be." In his humble occupations and wild excursions he gained a real knowledge of nature in all its aspects, of which he afterwards made exact and excellent use. Had he not known the habits of deer as well as the ways of men by direct observation, he could hardly have written the soliloquy of Jacques on the poor stricken stag, or pictured the behaviour of the frightened deer when it stands at gaze, bewildered which way to fly.* If he had not himself run with the harriers he could not well have described so vividly the devious course and wily shifts and thousand doubles of the dew-bedabbled hare, limping wearily to die near the seat from which it was started ; and poor Wat's last panting agonies when, listening erect on hind-legs, in fearful hope to have escaped, it hears renewed the clamorous cry of its loud pursuers—

And now his grief might be compared well
To one sore-sick that hears the passing bell.

If he had not many times been out before sunrise he could not have written with fresh and eloquent feeling, as he often does, of the gentle lark mounting up high from its moist cabinet to wake the morning with its song, and of the many a glorious morning which he had seen burnish the

* As the poor frightened deer that stands at gaze,
Wildly determining which way to fly.—*Rape of Lucrece.*

cedar-tops with gold and gild pale streams with heavenly alchemy. Had he never witnessed the pompous stupidity of the parish constable, big with his sense of office, and the vain and testy feebleness of the self-important justice of the peace, he could hardly have presented with such rare force and humour the characters of Dogberry and Justice Shallow ; and without the memory-ache of his own lustful youth, he might not have thought of making Prospero twice grossly obtrude a coarse warning against incontinence before marriage, and recount its odious consequences in words whose grating shock goes near to spoil the sweet idyll of the loves of Ferdinand and Miranda. Why again the somewhat gratuitous admonition to the supposed page in *Twelfth Night* not to marry a woman older than himself, and the explicit reason why such marriage will not turn out well, if he was not generalizing too largely from his own unfortunate experience ?* A marriage in his case which, as things turned out, was a fortunate folly, a rashness that might well be praised, seeing that had prudence always ruled his conduct at Stratford he might have lived a quiet undistinguished life there, as many a person of equal natural endowments to his, never having

* In *Midsummer's Night's Dream*, again, one reason why the course of true love never did run smooth is a disproportion of years.

Lysander.—Or else misgraffed in respect of years.

Hermione.—Oh spite ! too old to be engaged to young.

been cast on the exactly suitable conditions of his best development, doubtless has done in his native town. Singularly fortunate, if we think on it, was the fateful conspiracy of circumstances by which he was made what he was: first, the happy co-operation of compositions and impressions in the germinal production of him, and afterwards the several succeeding conditions of his development through life, propitious in the result even when they seemed accidents, misfortunes, errors at the time. By such blessed coincidence of gifts of nature and fate of fortune, not by merit of his own, it is that the great genius is evolved, however described—whether as the man of destiny, the illumined seer, the inspired prophet, the incarnate spirit of the age, the co-worker with nature in its process of human evolution.

It may be said, of course, that his dramatic presentations were only abstract creations of his great imaginative faculty; but their difference from such mere inventions was that they were vital products, not artificial constructions, deriving their life and substance from actual experience of men and things, the organic flowering of a most rich and rare imagination full nourished by realities and ruled by a large and well-instructed understanding. Having observed much, noted what he saw, and drawn large reflective profit from every observation—found “sermons in stones and books in the running brooks”—and apparently so well stored that which he had once

seen and thought, either in the table of his memory or in written tablets, as never to lose good use of it, he was able to embody the quintessence of rural nature, animate and inanimate, and the traditions and beliefs of the countryside in forms of exquisite art. Therein he pursued instinctively the method which is just the method, conscious or unconscious, of organic progress in all mental growth—namely, the fit incorporation and transformation of nature through living union with it. As the scientific enquirer does advisedly and methodically, so he observed naturally, meditating and making inductions or inferences, which he did not then leave as mere untried theories, “thoughts unacted,” but unfolded and tested by deductive application to particulars ; knowing well, as he says, that

Thoughts are but dreams till their effects be tried.

Assimilating all nature directly and freshly, not stalely and conventionally at second hand, he carried forward its organic development through himself ; which is just what every great leader of thought or action does in his sphere of work, but visionary theorists often barrenly fail to do.

If one thing is certain it is that Shakspeare was sanely human and sagely practical in every quality of him, virile in character as in verse, nowise a tense-strung neurotic, nor overstrained idealist, nor mere barren melody-monger, and that his work in life and art was the sincere, full, free

expression of his whole self, material and spiritual. A joy and relief no doubt it was thus to fulfil himself by the complete realization of his whole being in the discharge of every function of which its richly endowed nature was capable ; his natural instinct urging him to do well in business what he had to do—he could not have borne to do it ill—and to reap the ensuing profits, and the silent melody in his nature translating itself outwardly into the elegance and golden cadence of poesy, which was its own pleasing reward.*

Unlike the professional poet of the closet, therefore, who, without having been structurally informed mentally by feeling and working in union and collision with men and things in the stress and strife of life, sets himself with deliberate purpose and labouring endeavour to write dramas, he bodied forth living experience of them in his scenes and characters. His art was the full, fresh, incorporate expression of a life of work and thought, in which might have been said of him, as he makes Cæsar say of Casca—

He reads much ;
He is a great observer, and he looks
Quite through the deeds of men.

That which he saw, felt and meditated on was wrought into the living structure of his mind and discharged as its natural function. A wonderful

* “ ‘ Elegance, facility, and golden cadence ’ of poesy.”—*Love’s Labour’s Lost*.

achievement of a more wonderful being it would be, were any one to obtain a real knowledge of human nature and think or write profitably about it by living apart from it, not acting on it nor acted on by it. Not observing only, but ever deeply reflecting on the many and diverse relations, subtle as well as obvious, wide-reaching as well as near, of that which he observed, he reflected facts and their relations in just ideal presentations through his rare and rich nature.* His art itself was Nature, for nature made that art; so much so that it sounds strange, almost derogatory, to call him artist; it was nature working through him a living part and organ of it, not the forced labour and poor produce of the conventional poetic market. Therefore it is that he transports his reader out of himself to feel and think with his characters, allowing no time nor

* The would-be poet, before poetizing, might perhaps do worse than betake himself to a serious study of Shakspeare's works, in order to note the number and variety of the facts, small and great, observed and noted by him—it would almost seem that there was nothing which he did not observe—and made good use of, descriptive, illustrative, and in prodigal similes; he could not then fail to learn: (1) How much he himself had not observed which he might easily have observed; (2) how little he had reflected on the universal relations of every single fact which he did observe—whole nature comprehended in each small circle of it; (3) how poorly qualified without such large observation of facts and rich reflections on them he must needs be to write poetry possessing Shakspearian substance and vitality.

halt to examine and criticise even when they perchance talk blatant bombast, or make, for them, quite impossible speeches ; wafts him in fancy from scene to scene with a magic power and celerity ; so subdues imagination to present surrender as to make him almost a simple child in submissive faith. Inevitably so, for attention is not separately called to the many processes, the insignificant details, the million incidents, the long-drawn-out periods and series of things as they pass with slow pace through the length of times, but continuously to the distilled and abstract essence of them condensed into compact scenes and acts by his insight and imagination ; and that sometimes with sublime indifference to artistic form, to the classic unities of time, place and action, to a natural flow of events from characters and situations. His method of mental production was truly organic—in fact, just Nature's own method of progressive evolution through time in its work of building up an ascending series of organic tissues, structures, and beings through processes of minute concentrations of time, space and motion : through increasing complexities and specialities of structure and function, that is, up to the finest mental organization, in which such concentration reaches its utmost height.

Being the close, clear-sighted and sympathetic observer of nature he was—in such intimate communion with it that he and it were one, he in it and it in him—the nature-spirit so imbues his

thought and feeling that his melodious language is no garment skilfully put on but its natural living vesture, the fresh and spontaneous eloquence, sometimes gross exuberance, of their organic union ; for which reason it is capable of awaking by sub-conscious associations in kindred minds intimations and intuitions of the deepest and most subtle harmonies and relations of things. In exemplification of the immense difference in this respect between him and other poets, one may compare or contrast Shakspeare with Wordsworth in their respective references to the daffodils. By the former we are told of

The daffodils

That come before the swallow dares, and take
The winds of March with beauty—

where in simplest words paling winter and fresh-budding spring, the forefelt lays and flights of coming bird life, the hues and scents of flowers, are blent and suggested in one sweet harmony of brief expression ; nature's pure fresh spontaneous utterance of itself through him, marred by no subjective jar of self-conscious individuality. In the latter, we fail not to feel the egotistic note which intrudes into the contemplation of the poet, whose delighted heart, with pleasure filled, "dances with the daffodils" ; his mind not merged and blent in the subject, but construing it consciously in terms of his dominant mood ; just as if things in nature were created for him, as he lay "couched upon the grass" or sat at ease

in his pensive moods of reverie, to weave webs of similes, to moralize, to joy or sorrow, to find spiritual meanings, to devise prettinesses of imagination and words : not he created to express nature simply and singly as its living organ, without bias or distortion by any self-conscious intrusion of self.* In Wordsworth's poems, therefore, inquisitive poet of nature as he was, the admiring reader reflects sympathetically the feeling he feels, its individual specialization, rather than the deeper unity of self and nature to which Shakspeare gives full, direct, melodious utterance ; enjoys nature partially and indirectly, as translated through the poet's well-woven thoughts and self-watched, self-fondled feelings of it.

That Shakspeare was likewise a close and sympathetic observer of human nature needs no saying—in such intimate sympathy with all its moods and tenses in its procession through time that the generic quality of humanity, the spirit of its being, is displayed by him in the characters and events of imaginative drama more essentially and truly

* Oft do I sit by thee at ease,
And weave a web of similes.—
Ode to the Daisy.

Again, in *Poems of the Imagination*, speaking of the daffodils :

For oft when on my couch I lie
In vacant or in pensive mood,
They flash upon that inward eye
Which is the joy of solitude ;
And then my heart with pleasure fills,
And dances with the daffodils.

than by the persons and doings of actual life. When the clown moralizes more sagely and makes more witty speeches than any particular clown ever did, it is not the individual clown—he would have been aghast at his own wit—but the universal clown-spirit which views and speaks through him the comedy of life. When Lady Constance, refusing to obey the King's summons, seats herself on the ground and bids kings attend on her unexampled grief, it is a summons to the pride of humanity to bow before the spectacle of its transcendent humiliation. When the over-meditating Hamlet, thinking ever too precisely on the event, finds excuse after excuse for not doing that which, resolute to do when he broods on his wrongs, he has not the will to do when he might do it easily, and does at last as the unconscious instrument of destiny, it is an universal instance of the influence of over-meditation to paralyze action, and of the fate-wrought issue of that which was to be.

Not that over-meditation was the sole or even main factor in Hamlet's irresolution to act. He may well have had that constitutional indisposition to decide and do which is characteristic of certain natures, and the much meditation have been the result and after-excuse, rather than the reason, of the indecision and inability. It is wonderful to see how strongly possessed over-meditative natures of that kind are by a constitutional and almost invincible reluctance to determine and act, whether

in small or in great matters, and more perhaps in small than in great things—for all the world as if they were held back secretly by some invisible power ; in the end postponing, positively shirking, action until forced to it by necessity, or impelled by an explosive mood emanating from the subconsciously gathering forces of fermenting thoughts and feelings. It requires usually an extraordinary stimulus, the excitement of strong feeling, or even an artificial stimulant, to elicit the latent energies of their nervous systems, in which case they show themselves capable of vigorous and effective action. If Shakspeare perchance had that sort of temperament—Hamlet is proof, anyhow, how well he understood it—it might account for the modest tenour of his life and his carelessness or aversion to push himself socially in London.*

Everywhere in his poems we perceive the same lesson of organic unity with nature. Because he realized intimately that he was a living part of nature, could have no individuality separate from it, and dimly felt the vast unintelligible mysteries of things, he brings nature and human nature into mysterious, transcendent, almost awful sympathies : raging tempest, thunder-crashes, lightning-flashes to attend Lear's mad ravings ; monstrous prodigies of nature to forbode great Cæsar's assassination ;

* A morbid exaggeration of this incompetence of will characterizes a distressing form of mental affliction which grows even sometimes to actual malady.

strange and ominous phenomena to mark the foul night of the treacherous murder of Duncan. Intellectual disbelief of a superstition is not inconsistent with an emotional half-belief of it, which half-belief shall in moments of great mental perturbation become a positive conviction, as perhaps it was with Gloucester in *King Lear* when he says :—

These late eclipses in the sun and moon portend no good to us : though the wisdom of Nature can reason it thus and thus, yet Nature finds itself scourged by the sequent effects : love cools, friendships fall off, brothers divide ; in cities, mutinies ; in countries, discords ; in palaces, treason ; and the bond cracked 'twixt son and father.

Instead of unwise haste to blink or minimize the disreputable events of his career, it might be wiser to look upon them as having been the necessary outcome of his character ; just as essential a part of his life as his patient industry and imaginative fertility, and nowise therefore deplorable. Anyhow they were a part of it, even if nature had done amiss in his composition, and they ought properly not to have been. More likely there was no such cosmic blunder, and it was only from the deep basic materiality of his nature that the sane and rich splendour of its robust spirituality was or could have been sublimed. Is not this inference perchance a simple law of organic growth which, when he clearly apprehends it, will dissolve the amazement of the psychologist who, feeling his foundations sink under him, staggers blindly at the seeming inconsistency of vice and virtue in the same

person? Had nothing been known of the first half of the life of Saul, the fierce Jewish persecutor, a suggestion that Paul, the enthusiastic apostle of Christianity to the Gentiles, had ever been Saul would have been scouted as blasphemous; and if Augustine in his *Confessions* had not with complacent remorse re-savoured the lickerish taste of his youthful sensualities, it would have been thought a monstrous slander to hint at the licentious life of the saintly Bishop of Hippo. So also with a more adequate mental equipment for its task might literary criticism cease to marvel at Burns as a monstrous incongruity because of the mixture of gross sensuality and fine spirituality he was. The truth is that there is nothing strange in such combination of seeming contraries; the strange thing is to think them strange; and the ideal designer of a perfect human being who should go about to eliminate the material part from his composition would make but a poor devirilized and devitalized product in the end. It is not the way of nature, it is the custom of cloistered critics only, to make organic disunities, for nature's frequent fashion is

To mingle beauty with infirmities,
And pure perfection with impure defeature.

Again :—

But no perfection is so absolute
That some impurity does not pollute.

Humanity has lived untold thousands of years on earth, but it has not yet had time to become perfect or even to fashion a perfect human being ;

still only in the slow making it is a long way from that far-off end. Not observation only of men and things but the ideal use also of his own very mixed experience it was which instructed and qualified Shakspeare to be the wonderful delineator of humanity he was. Even he, all-heeding as he seemed to be, would have been much wanting as an observer of nature had he left out that part of it which he could observe best and with least risk of error—namely, himself.

Did he, when he left Stratford, drift straight to London? That has been the usual assumption. Nevertheless some ingenious considerations set forth by Judge Madden in his *Diary of William Silence* suggest that he may have crossed the borders of the county into Gloucestershire, where some of his relations were then or subsequently settled, and found humble employment there. The author adduces many striking arguments to prove that he gained there the special and accurate knowledge which he shows of falconry, and of the way to tame and train a falcon by starving it of food and sleep, of the virtues and faults of particular hounds, and of their behaviour and that of the hunted stag when at bay. Certainly he never could have known horses, hounds, hawks and hunting so well as he did had he not had to do with them practically by actual attention to, or care of, and work among them.*

* Besides his well-known exposition in *Venus and Adonis* of the good qualities which a perfect horse ought to possess, he

On reaching London, whether directly from Stratford or indirectly after humble work of some sort elsewhere, he made his way to the playhouse in Blackfriars ; there his first employment, according to report, was to take charge of the horses of those who rode to it on horseback. So good was the care he took of them that he soon had a large business and found it necessary to employ boys to assist him, who, known as Shakspeare's boys, were much in request. Be the story true or not, certain it is that his occupation about or in the playhouse was at first of a mean sort. How he was attracted to it is not known, but it is probable that he had made acquaintances in the companies of players or their hangers-on who, under the patronage of different noblemen, visited Stratford from time to time and performed plays in the Town Hall at the cost of the Corporation. He may, too, have been drawn there by his love of the theatre and the premonitory poet's throes which he could scarce fail to have felt, even if he had not already given youthful utterances to them in the doggerel rhymes which, as an unauthenticated story tells, he declaimed when flourishing a knife to kill a calf, and in the lampoon fixed on Sir Thomas Lucy's park gate. For it is not to be believed that, "born under a rhyming planet" and having

shows an extraordinary acquaintance with the diseases of the horse, particularizing in *The Taming of the Shrew* some dozen different ailments with which Petruchio's horse was said to be afflicted.

eagerly attended the performances of the players at Stratford as a boy, he had not been stirred by any rhyming impulses before he was twenty-one years old. Think, in this relation, on the case of Burns, whose clever verses, satirical and amorous, gained for him local celebrity as a village poet of notable merit some time before he grew to be the public idol which, unfortunately for him, he became for a time. So far from incontinently rejecting the stories of Shakspeare's early poetical exercises as unworthy calumny, a wiser reflection, pondering his inborn aptitudes and the mean conditions of his boyhood, might perceive in them evidence of his poetical drift and their truth.

Between the date of his leaving Stratford, in 1585 or 1586, and the publication of *Venus and Adonis* in 1593 ("the first heir of his invention"), dedicated to the Earl of Southampton, he rose steadily to a position of growing influence and authority in the theatre as actor and dramatist. Besides his work as player of small parts on the stage, he was occupied in revising, recasting and adapting old plays, in examining new plays submitted for representation, and in writing his own plays. That he made the largest use for his purposes of the old plays in store at the playhouse, adopting plots, characters and even whole passages freely wherever he found suitable spoil, is certain. Therein he was literally many-minded, since he deliberately absorbed the works of many minds. But he so assimilated what he took from

the available material as by the magic of his genius, bettering their best, often to convert things crude and indigest into something new and rare. Like Virgil, he might have sometimes said *ex stercore Ennii aurum colligo*. If that be plagiarism there was no greater plagiarist in the world than Shakspeare, unless it be Milton. To take silent possession, conscious and unconscious, of the best fruits of past thought and feeling, and to fashion them into finer forms of more concentrated art, that is the natural course of evolution of human genius and the destined fulfilment of organic growth through it.

No wonder, then, that he inflamed the envy and malice of those who had been accustomed to supply the theatres with plays. He had superseded them ; their occupation was gone ; and the rare merit of his work they could not choose but see, howsoever loth to own it. Before the publication of *Venus and Adonis*, in 1593, the angry jealousy of Greene, the dramatist, shortly before his death in abject poverty after a life of profligacy, broke out in his *Groat's Worth of Wit* (1592) in a warning to his boon companions, Marlowe, Lodge, and Peele, to relinquish the labour of writing for the stage—

Is it not strange that I to whom they have been beholding
shall (were ye in that case I am now) be both of them at once
forsaken? Yes, trust them not, for there is an upstart crow
beautified with our feathers that with a tiger's heart wrapped in
a player's hide* supposes that he is as well able to bombast

* A tiger's heart wrapped in a woman's hide.—*Henry VI.*

out a blank verse as the best of you ; and being an absolute Johannes Factotum, is in his own conceit the only Shakescene in a country.

“Johannes Factotum,” since he was actor, author, manager all in one ; “an upstart crow beautified with our feathers,” since he freely used and adapted the works of others, taking for himself all that he could profitably glean from them ; “a tiger’s heart wrapped in a player’s hide,” since he, writing plays himself, rejected plays of which the theatre had no need, thus saving it payments, of which Greene and his companions were in sore need ; “the only Shakescene in a country,” since he combined unequalled dramatic genius with a practical knowledge of stage-craft and all the qualities of a good manager.

Not that the description of him as a tiger’s heart wrapped in a player’s hide was in the least warranted by his character and behaviour. It was the rancorous explosion of festering envy. Indeed, Chettle, the publisher of the pamphlet, in a work published a few months afterwards, made frank amends to Shakspeare, who had been justly offended by what had been unjustly said of him. Expressing his regret for his fault, he says : “Because myself have seen his demeanour, no less civil than he excellent in the quality he professes. Besides, divers of worship have reported his uprightness of dealing, which argues his honesty, and his facetious grace in writing, which approves his art.”

Evidently, then, Shakspeare was not only esteemed highly for his genius and civil behaviour by men of rank, but well thought of for his gentle demeanour and his upright dealings in business. Certainly he was a good husband of his affairs and looked warily after his own ; no tradesman in Blackfriars probably surpassed him in the watchful care which he bestowed on them, in the rigorous exaction of punctual payment of debts due to him, in the diligent industry with which he steadily added to his growing gains. A conclusive proof once for all that the highest genius, the flower of human evolution at its best, may go along with—might one not truly say must go along with?—the capacity of patient attention to the dull routine of common labours and perfect sanity of mind ; a lesson to inferior genius disdaining irksome self-discipline that it has no right, just because of its single strain of merit, to wail and rail in puling whine against fate and to call on gods and men to help it ; a warning perhaps to genius of every sort, if it would lay its basis sure, that the fullest and most wholesome mental development can be achieved only by actual work and discipline among men and things in manifold relations and reactions of adaptation to a whole environment, nowise by the forced cultivation of a special strain in the sheltered seclusion of the closet. Excellent as originality and individuality are in their place and proportion to initiate and sustain new thought, provided they be duly

nourished and ruled by realities, they are futile and ridiculous when they degenerate into nervous over-strains counted spiritual, or into mere eccentricities out of tune and proportion with realities. Were they meritorious by themselves the lunatic who carries eccentric originality and overweening individuality to the highest pitch might claim the palm of merit, as he, superbly self-satisfied with himself, often quite confidently does.

Steadily gaining increase of influence and property in the theatre by his prudent conduct and diligent industry after he had got his footing there, he also grew steadily in poetical power and reputation. Although in dedicating *Venus and Adonis* (published in 1593) to the Earl of Southampton, from whom he received large pecuniary favours and to whom he was otherwise indebted, he calls it the first heir of his invention, he had contributed plays to the theatre, five of which had then been printed. This poem he might think right so to describe since it was original, whereas his previously printed plays were no doubt in great part adaptations and improvements of material which he found ready to hand, or perhaps written in collaboration, and his sonnets were then only circulated privately. However that be, *Venus and Adonis*, followed as it was in the year following by the *Rape of Lucrece*, proved at once to all the world that, far from being only an adapter and imitator of other men's works, he was an original poet of rare genius. Even Greene, penitent on

his deathbed, might—one would fain think it—have rued and retracted his angry censure.

From the beginning of his connection with the theatre he not only attended sedulously to its business but was diligently occupied with the cultivation and improvement of his mind by the serious study of great writers. As Prospero says of himself—if not he of himself in the person of Prospero—he “was living in closeness and occupied with the bettering of his mind.” He read and no doubt re-read Montaigne, Rabelais, Plutarch, Seneca, Horace, and Ovid, and most likely made notes of the thoughts which they expressed and suggested. It has been a question whether he read Latin authors in the original or only in translation, but it is a question hardly worth asking ; for it is certain that a person of his capacity and industry might easily so improve his knowledge of the little Latin learnt at school as to be able to read it fairly well. If *Titus Andronicus* with its gross blood-and-horror scenes be one of his immature products (supposing, that is, that he wrote much of it), it might perhaps yield a significant hint that he was then applying himself to better his reading of Latin ; for the quotation of a whole verse from Horace, if it does not show a pride of knowledge, is hardly what he would have introduced into the best work of his riper season.* That he made systematic notes

* In other plays, however, scraps of Latin are rather gratuitously if not incongruously introduced ; whatever their purpose,

of what he read and thought for profitable use afterwards I make no question. The advice which he deliberately gives to his friend in Sonnet 77 to imprint his thoughts on "vacant leaves" at the time, so that, thus committing to writing what his memory could not contain, he might find them nursed

To make a new acquaintance of thy mind,

points to that which was probably his own method of work.* It belies common sense to suppose that he worked without effort and without need of revision; no great work that has survived oblivion was probably ever done in that easy fashion; his sonnets bear unquestionable evidence of labouring pains taken in invention, construction and artistic finish, and were probably revised, corrected, amended and rewritten several times. That which was effortless was the spontaneous outpour of rich thought and fine melody.

they have no other effect than to show that the author was reading Latin and had a knowledge of it which would have been surprising in the person who made the quotation. In the *Taming of the Shrew*, for instance, Tranio, a so-called "serving man," speaks of "Aristotle's cheks" and quotes a line at length from Ovid.

* Look, what thy memory cannot contain
Commit to these waste blanks, and thou shalt find
These children nursed, delivered from thy brain
To make a new acquaintance of thy mind;
These offices, so oft as thou shalt look,
Shall profit thee and much enrich thy book.

Mindful how surely conduct bespeaks character, and how precise and careful his character showed itself in affairs of business, it is no unreasonable surmise that he bestowed an equally diligent care on his best poetic work, howbeit little enough on some passages of bombastic rhetoric which he poured out hastily for present use, and would have done well, as Ben Jonson thought, to have blotted out. He probably accumulated and laid by a rich store of observations, reflections and similes as systematically as he accumulated material riches, and he certainly was no less keenly vigilant to gather scenes, plots and ideas for his dramatic use than to gather and lay by the profits of his skill and industry in business. The ideas of other writers, their felicities of style, even whole passages from their writings, were appropriated without scruple when it suited him, and gloriously translated by his matchless powers of varied and melodious expression. Nor did he allow the reflections and similes, the wise saws and modern instances which he had stored, to go to waste, but took care to place them, fitting or unfitting, in the mouth of one or another of his characters, perhaps introducing scene or person into a play, without regard to dramatic unity and with no regard to artistic proportion, in order to make use of them. Of all persons in the world the speakers of them would sometimes have been the most surprised at their own wit and eloquence if they had heard themselves utter them.

As everything suitable was thus absorbed by his

widely receptive mind, transformed by its plastic genius, and skilfully used by his practical knowledge of stagecraft, his plays incorporate the condensed wisdom of the greatest moralists and the best dramatic skill of his literary predecessors essentially assimilated and freely used. "Myriad-minded," as Coleridge styled him, he was, because his capacious mind was able to absorb and express the essences of myriad minds. Impersonal, too, he seems in his dramas, just because no formal training, no conventional taste nor distaste, no exclusive sympathies, no subjective hues of personal feeling, interfered with the full and impartial exercise of his calm and close observation, his large assimilative capacity, his detached reflection, and the wondrous excellence of his objective presentation of men and things, his own varying moods included. Despite the French proverb, it might be said of him that at the same moment he joined in the procession and watched it from a window.

Think on the good luck it was for him not to have received a complete classical education. Had he been painfully trained after traditional rules the freshness and originality of his genius might well have been hurt or quite ruled out of existence, his thoughts forced into beaten tracks, his utterance tied to conventions of expression ; such system of education, instead of educating his native powers, being suited rather to check, if not suppress, their throes of growth and mould him to the common type of the average citizen.

If springing things be any jot diminished
They wither in their prime, prove nothing worth.

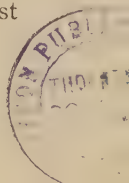
Think again on his possible fate if he had been born in the present age of rank literary profusion, and so had run the risk of mental devastation by its deluge of books, magazines and newspapers. There may be more than one reason why genius is often bred of parents in humble life ; not the freshness and vigour of an unexhausted stock only, but the freedom granted to its full expansion by the absence of rules which, being constraints, are sometimes restraints of growth. How many hapless buds of genius may not exhibitions and scholarships have rudely blighted, or forced pitifully from their fruitful bent to blossom barrenly into College Dons ? Is it, when all is said, the worthiest aim and happiest achievement of human art to transform a Board School boy into a Senior Wrangler who may thenceforth spend his life in the emendation of a Greek text, pleasing and useful as such-like work may be to him if it be his assiduous joy ?

Certainly it was a blessed hap to Shakspeare, would have been a pitiful mishap had it chanced otherwise, that his intellectual nourishment was limited to the study of a few great writers whom he read diligently and inwardly digested ; his native genius could have had no mental foodstuff better suited to nourish and invigorate its splendid growth or been afforded a freer scope of development. Thereby in the event he happily preserved

unlamed his gift to look through the show into the very heart of things, to disregard the fetters of conventional rules and unities, to grow in living touch with Nature, to feel freshly, see directly and utter sincerely that which he saw and thought.

Inevitably, therefore, was he somewhat out of tune with conventional thought and art ; his pre-eminence above his fellows not recognised by his contemporaries, perceived perhaps by a few discerning persons only, not one of whom probably ever dreamed that he was destined to be counted through the ages as the foremost poet of all time. Had there been in England such a self-recruiting academy as the French Academy it is not in the least likely that he would have been elected one of the forty ; like Balzac, Diderot and some other great French writers, he would too surely have violated the susceptibilities of mediocrity by his originality, offended its tender taste by his direct sincerity, exasperated its vanity by his superiority.

After all is said of his extraordinary genius, it has taken the world two or three hundred years to discover and appreciate it properly. Now, too, the admiration has become such a caked and sacred custom that there is often small intelligence in it, loud-mouthed homage and tongue-rooted adulation only. It is the old story : admiration, adulation, adoration—in other words, wonder, worship, prayer—such are the rising steps of man's retrospective man-worship in quest



of the ideal and his consequent craving to idealize the real. In the paradise of the ideal it is natural to plant gods. Moreover, his language, like that of the Bible, has been so intimately wrought into the tissue of the English mind, and is now so familiar a possession, that rhetorical passages which would be deemed obscure, confused, even bombastic in a writer of the present day pass easily—nay, are received with a sort of awful reverence without thought of their incongruity or crudity. True and discriminating admiration is smothered in the incensing adulation which creates its idol and will then have its idol without a flaw, making the man a god. What would critics to-day say of a living poet who, speaking of love, were to liken love's fine feelings to "tender horns of cockled snails"?* Or make it the special praise of a maiden's slender fingers that they were white as milk? Or compare the instant falling in love of two lovers at first sight to the behaviour of two rams which, looking up suddenly when pasturing quietly, pause for an instant, then rush headlong full butt, skull against skull, with loud-sounding crash? Or represent a common prostitute like Doll Tear-sheet as declaiming magniloquently about Hector and Agamemnon? Furthermore, this often happens nowadays, that a trite and obvious

* Love's feeling is more soft and sensible

Than are the tender horns of cockled snails,—

Love's Labour Lost.

reflection or an old proverb rhythmically expressed in his melodious language is accounted his, admired as if it had never been spoken before and enshrined for evermore.*

In 1604 or 1605, after twenty years of industrious work as play-writer and player, he left London to reside at Stratford, making periodical visits thenceforth to town to see his friends and look after his interests. All the while he had steadily added to his possessions, purchasing land, houses and the leases of tithes in Stratford, besides increasing his shares in the theatre and buying at least one tenement in Blackfriars. From the first he had a definite aim which he pursued definitely : was persistently bent on retrieving the family fortunes and on retiring to live in dignity and reputation at Stratford. When his father, who in 1592 had been in debt and distress, applied to the College of Arms in 1596 for a grant of armorial bearings, stating that he was worth £500 in lands and tenements, the

* If he was Homer-like in his fresh and direct converse with realities and pure melody of natural utterance, his absolute return to nature, it is all the more wonder nowadays that our modern poets, who make that the great praise of him and of Homer, and praise them as the greatest poets of all time, should for the most part set themselves painfully to work to get as far as possible from living touch of real life and direct simplicity of diction ; the more pleased with themselves, apparently, the more fancifully ingenious, the more thinly spiritual, and the more startling and obscure they can strain themselves to be.

application was doubtless made at the instance of his son, who conveyed to him the necessary qualification, and in the year following himself purchased the best house in Stratford. A grant of armorial bearings Shakspeare subsequently solicited and obtained from the Court of Arms, and retained, although some of its grants then made to other players were afterwards cancelled as scandals. Such was the mortal ambition of the great immortal : to possess land and houses, to enjoy the blazonry of a coat-of-arms, to entail a real estate on the eldest son of the family through successive descents. The result we know was failure. He most heeded apparently that which he did not gain, but gained that of which, being assured, he took little heed. No one, not even a Shakspeare nor Goethe, emancipates himself from the social atmosphere of his time and place ; be the human ever so great it is still not super-human ; earth-planted feet tread the ground, however sky-aspiring the thought.

2. *Sonnets.*

WHOEVER was the mysterious "W. H.," "the onlie begetter" of the Sonnets, one thing is plain, that they were addressed to a person of high social rank and of such cultivated intelligence as to be worth the homage and to appreciate their worth,* no doubt one of the young gallants of

* And they might well be addressed to William Herbert, Earl of Pembroke, having regard to their matter and his

fashion wont to frequent the theatre for his entertainment who had contracted a close intimacy with the poet ; one, too, who, joining grace and wit to birth and beauty, had quite a woman's delicate features, was gentle-hearted as a woman but not inconstant, " as is false women's fashion,"* withal wantonly addicted to the dissipations of lustful youth.

The feelings of affection are set forth with profuse ingenuity and garnished with all the sparkling conceits of wit and fancy which the special theme of each sonnet lent itself to: exuberant imagination spent in the invention of

character as depicted by Clarendon in his "History of the Rebellion." "Yet his memory must not be flattered that his virtues and good inclinations may be believed without some alloy of vice, and without being clouded with great infirmities which he had in too exorbitant a proportion. He indulged to himself the pleasures of all kinds, almost in all excesses. Whether out of his natural constitution, or want of his domestic content and delight (in which he was most unhappy, for he paid much too dear for his wife's fortune by taking her person into the bargain), he was immoderately given up to women. But therein he likewise retained such a power and jurisdiction over his appetite, that he was not so much transported with beauty and outward allurements as with those advantages of the mind as manifested an extraordinary will and spirit and knowledge, and administered great pleasure in the conversation. To these he sacrificed himself, his precious time, and much of his fortune."

* A woman's face, which Nature's own hand painted,

A woman's gentle heart, but not acquainted
With shifting change, as is false women's fashion.

exquisite variations on the central thought ; these for the most part wonderfully devised and executed, now and then overstrained to an irritating excess, two or three of distinctly unworthy artifice.

That Shakspeare was actually consumed by the passion which he metes out elaborately in fine streams of melodious wail is nowise probable ; had his feelings been more deep they would have been more simple and more simply uttered ; of set purpose he made each sonnet a finished piece of clever art, using his complaints deliberately as material for his poetic compilation, and pleasing and easing himself by such outward embodiment of them. The sonnets are not, therefore, the single outpourings of much moved feeling, the smooth flow of a deep stream, they are rather exquisitely laboured exercises of the finest imaginative art to which some real feeling lent motive ; just skilfully infused with such essence of personal experience as could be utilised for the best artistic effects. That he never went at all through such experiences and emotions as he depicts, but evoked wholly out of his own consciousness by forced poetic aspiration a tissue of purely abstract conceits and sentiments, is a theory which, besides being contrary to the known facts of his life, is psychologically absurd. Because his richly productive imagination was rooted in realities and grew into its opulent splendour organically, as flower from stem and

stem from root, therefore a vital embodiment of thought and feeling in his verse appeals vitally to thought and feeling.*

Notable in this respect it is how widely his pregnant verse, full-fraught with thought and feeling, differs from the thin poetic stuff, the matterless melodies, in which laboured ingenuities of expression, strained touches of rhetoric, feverish feats of rhythm and alliteration, refined pretiosities of diction, speak nothing substantial. Concocted studiously with writhing strains and pains not to say something which the authors have to say, burdened inwardly to unburden themselves outwardly, but because they torture their minds to say something in singular fashion when they have little or nothing to say, such productions are at best lifeless artifice, not matter to which true "art gave lifeless life,"† garlands of cut flowers with no flow of vital sap in them, the barren work of fanciful invention lacking the pith and pulse of real life. A man "full of warm blood" who lived a man's life of work in the world, Shakspeare wrote poems and plays imbued with experience as incidents of his life-function, if not by the way, at all events on his way; thoroughly masculine in every quality of him, his work was male and strong without sign of strain; they, poets by pro-

* Denn es muss von Herzen gehen
Was auf Herzen wirken soll.—GOETHE.

† *Rape of Lucrece.*

fession, are driven oftentimes to bring forth with difficult travail various elegancies of laboured artifice. Using Bacon's simile, one might say that he, the "honey-tongued" songster, like the bee, gathered honey from every fact of life ; they, like the spider, spin fine-patterned cobwebs out of their own insides.

In the series of sonnets addressed to his noble friend and patron three things are made manifest : first, that Shakspeare was calmly conscious of his own great powers and of the value and vitality of his verse ; secondly, that he felt keenly and resented bitterly the contrast between the low station in which fortune's spite had placed him and the social eminence of his friend ; thirdly, that they were closely associated in a looseness of life which had somehow cast a slur on his name and hindered just social recognition of his genius.

(1) Assured belief of his own worth was scarce wanting to one who could aspire, as he did, to confer "immortal name" on his friend by praise in "eternal lines," of which he dared predict :—

So long as men shall breathe and eyes can see,
So long lives this, and this gives life to thee ;

who proclaimed that

Not marble nor the gilded monuments
Of princes shall outlive this powerful rhyme ;
But you shall shine more bright in these contents
Than unswept stone besmeared with sluttish time ;

who foretold to him an immortal name in verse

Which eyes yet uncreated shall o'er-read
When all the breathers of this world are dead ;

who boldly declared

And thou in this shalt find thy monument
When tyrants' crests and tongues of brass are spent ;

who was serenely sure that he had written that which would "outlive a gilded tomb," and make the memory of his friend "live in the eyes of all posterity" to the world's ending doom.

Such tranquil conviction of the value of his verse is a striking comment on the conventional cant of mediocrity that great genius is too modest to know its own greatness ; that as it is not conscious in the least how it creates, so it is unconscious of the superior worth of that which it creates. Strange, indeed, if the superior man had no inward feeling of the power which uplifted him, and, uprisen, was the one person in the world blind to his superiority. As if height of mind were something less positive and manifest than height of body !

No one, if we may interpret literally, has ever made a bolder claim of everlasting merit for his verse than Shakspeare, and certainly no prophet of his own immortal fame in a mortal world has been better justified by the event. Genius is nowise arrogant when, knowing its value, it does not claim more than its due ; if its distinction is to do something new and true after its special kind which no one else can do so well, or do at all in the same or equal kind, it has as good a

right to its characteristic distinction as a man has to his name or his face. It is another thing when the special fashion is not the spontaneous well-proportioned expression of native genius, its inevitable and inimitable outcome, but the writhing disproportioned antic of one who, in order to make distinction, on purpose strives to put himself into the trick of singularity.* An ugly not a pleasing spectacle of human vanity it is that he makes who weakly pretends to personal merit in mental any more than in bodily height, and a pitiful display of over-tender self-love when he vexes himself to trumpet the merits which he is vexed that others do not see or will not acknowledge. Shakspeare showed no such silly conceit either in his demeanour, which was uniformly simple and modest, or in his supremacy as a poet, which he minded so little as to have seemed indifferent to it. To all appearance he was more seriously interested in the purchase of land at Stratford than in the fate of his dramas, and more ambitious to enjoy a position of dignity and consideration in his native town when he retired from the stage of the theatre than to live in the eyes of all posterity on the world's stage. The one was at all events a present positive joy, the other at best only a joy of expectation; and he was far too practical-minded a person to forego

* "Put thyself into the trick of singularity"—the advice given to Malvolio in the forged letter which betrayed him to become the subject of such excellent fooling.

positive riches for riches of the imagination, "to starve present appetite for the bare imagination of a feast."*

Is that a scarce credible supposition? Adequate reflection may show that it is not only credible but easily admissible. Overrating vastly its fugitive approbations and shifting standards of merit, mankind easily concludes that the great writer writes out of praiseworthy ambition to earn its praise—its praise of to-day being often the oblivion of to-morrow or the next day, the censure of yesterday the praise of to-day or to-morrow—whereas he writes because he must perforce formulate clearly what he thinks and feels; combine into shape the many fine and

* In a contemporary tract, entitled *Ratsey's Ghost*, there is what appears to be a direct allusion to Shakspeare. The author advises a player whom he meets to go to London, "for if one man were dead they will have much need of such as thou art." The "one man" was Burbage, who excelled in playing Hamlet. He goes on to speak as follows: "There thou shalt learn to be frugal (the players were never so thrifty as they are now about London), and to feed upon all men; to let none feed upon thee; to make thy hand a stranger to thy pocket; thy heart slow to perform thy tongue's promise; and when thou feelest thy purse well lined buy thee some place of lordship in the country, that, growing weary of playing, thy money may then bring thee to dignity and reputation; then thou needest care for no man—no, not for them that before made thee proud with speaking their words on the stage." "Sir, I thank you," quoth the player, "for this good council; I promise you I will make use of it, for I have heard, indeed, of some that have gone to London very meanly, and have come in time to be exceedingly wealthy."

swift undulations, subconsciously active, of nascent thought and feeling ; ease himself by bringing forth the perfected products of his mental gestation. Having done diligently the work which it came in his way to do for a livelihood and fulfilled his life-function in the sincere utterance of himself, Shakspeare left his productions, good and bad, with cool equanimity to the fate of time and events, well knowing that, when all is said—

Thought is the slave of life and life the fool of time,
And time that takes survey of all the world
Will have a stop.

What did it matter in the end when the end was "silence and eternal sleep"? The Destinies above all would in no case fail to make the right use of all that he had done in their service ; might be trusted to pursue their fated course of compensating good and ill in unceasing alternations and balances of production and destruction through time until time itself was at an end. At any rate, it was their affair through the length of times, not his within the brief length of a single life. Having the wonderful imagination he had, it is not likely that he lacked the imagination to picture a present proceeding always by rigorous law from a past and preparing a future essentially consistent with it ; no wiser nor worthier, perhaps, not really much different on the whole and in the long run of its human course.

Is it not a little naïve to suppose that one who showed such insight into the springs and move-

ments of the human drama on this little ball of earth, and grasped its infinitesimal significance in the cosmic course of things, should set much store by thoughts of what would not concern him in the least when he was not ? Why, having so short a lease, disquiet himself in vain about what might be in the eternity after he was, any more than about that which was in the eternity before he was ? Seeing that the people then alive would be the same sort of mechanical mortals, moved by the same passions in their limited circle, going through the same routine of plays in the same automatic fashion, the actors only changed, it was of small import what they might think of him and his work. Within the brief date and span of every life eagerly aspired aims once passionately pursued come to look like the remembrance of toys which pleased in childhood. In the mind only of him who imagines it is the joy of posthumous fame ; to nobody is it fame when he is, and it is nothing to him when he is not. Small then might its mortal attractiveness seem to one whose large oversight could calmly view this great stage of the world as presenting naught but shows and men as such stuff as dreams are made of ; whose retrospective imagination took remote survey of blind oblivion swallowing cities up, and "mighty States characterless grated to dusty nothing" ; yea, who foresaw in prospective imagination the time to come when, "like the baseless fabric of a vision,"

The cloud-capped towers, the gorgeous palaces,
The solemn temples, the great globe itself,
Yea, all that it inherit, shall melt away, and
Like this unsubstantial pageant faded,
Leave not a wrack behind.

This pensive reflection in his last and leave-taking play, where in person of Prospero he finally abjured his magic and broke his staff, was a kind of musing on the universal flux and transitoriness of things which was often in his mind, as several passages in the Sonnets show. In the play of *Henry IV.* (Act iii., Scene i.) the sore-tried and weary-laden king, ruminating sadly that if one could read the book of fate and see the revolutions of things—valleys raised and mountains levelled, continents pushed into seas and seas swallowing up continents, all the manifold changes and chances and passings-away of the world—exclaims

O, if this were seen
The happiest youth, viewing his progress through,
What perils past, what crosses to ensue,
Would shut the book and sit him down and die.*

If these were not Shakspeare's opinions, as it will no doubt be said, but reflections put fitly into the mouths of his characters, at all events they

* In the *Rape of Lucrece* his thoughts expand in detailed exposition of the destructive work of time which ruins proud buildings, tarnishes their golden towers, fills stately monuments with worm-holes, spoils antiquities of hammered steel, wastes huge stones with water-drops, dries the oak's sap, feeds oblivion with decay of things.

were his reflections, which he never could have made and placed so feelingly if he had not in some moods known and knowingly felt what he thus uttered. His, indeed, was the transcending faculty of objectifying his moods and reflections in scenes and characters and then calmly contemplating these from outside. Let it be borne in mind clearly and constantly that he had read much—not *nulla sed multum*, according to Pliny's maxim—and profited much by reading such authors as Seneca, Plutarch, Montaigne, Rabelais, and perhaps "murderous Machiavel," taking heed while thus pursuing his studies in philosophy not to be so exclusively devoted to it as to abjure the poets, especially his favourite Ovid, but advisedly using music and poesy to quicken his feeling* ; and it will appear utterly unreasonable to suppose that the sympathetic appreciation and large assimilation of their philosophy which he made could fail to involve an emancipation of mind from the customary estimate of life and things which gratifies the vulgar mind, and it glorifies. Like his great philosophic teachers, he was able to survey the course of human affairs in a spirit of detachment—with something like the pen-

* In the *Taming of the Shrew*, Act i., Scene i., Tranio advises Lucentio, while studying philosophy, to be no stoic,

Or so devote to Aristotle's checks
As Ovid be an outcast quite abjured

* * * *

Music and poetry use to quicken you.

trating insight and philosophic intelligence of Montaigne, the large and humorous survey of Rabelais, the cool scientific analysis of Machiavelli: nevertheless, a detachment which was intellectual only, not at all personal; as an ordinary citizen he was nowise emancipated from the common aims and ambitions of his fellows, being as philistinely eager to gain wealth, have a good house, and found a family, as ever Walter Scott was to buy land, build a mansion, and be a laird in Scotland.*

(2) While it is proof of the rare quality of his wit and genius that he was on terms of friendly intimacy with persons so much above him in social rank as the Earls of Pembroke and Southampton, he makes it plain that he had spells of gloomy dejection; when all alone bewailing his situation in life and the impossibility of social intercourse on equal level, he was tempted to curse his fate—

When in disgrace with fortune and men's eyes
I all alone bewail my outcast state
And trouble deaf heaven with my bootless cries
And look upon myself and curse my fate.

The grief of it was, though, "undivided in love," he and his friend were "divided in life,"

* Though one can hardly imagine him so jubilant to carry off a glass out of which Queen Elizabeth had drunk—as a precious memento—as Sir Walter triumphantly carried off a glass out of which George IV. had drunk in Edinburgh, unluckily breaking it on its way to Abbotsford,

owing partly to his low station, partly also apparently to some darkly hinted imputation on his name which made it impossible for the latter openly to acknowledge their intimacy—

I may not evermore acknowledge thee
Lest my bewailed guilt should do thee shame,
Nor thou with public kindness honour me,
Unless thou take that honour from thy name.

However that be, he was certainly sometimes oppressed with moods of melancholy, deepening at worst into almost dismal despair, else why, brooding darkly on the wrongs in the world—on “desert a beggar born,” on “purest faith unhappily forsworn,” on “maiden virtue rudely strumpeted,” on “gilded honour shamefully misplaced,” on “simple truth miscalled simplicity”—should he have called out for “restful death?” why spoken of having drunk potions of Siren tears distilled from limbecks foul as hell within? why even hinted at the quick ending of his life as

The coward conquest of a wretch's knife
Too base of thee to be remembered?*

* Not that he there probably hinted at suicide, as has been suspected. If perchance that were so, he no doubt soon eased himself of his moody thoughts, either by spending their energy in active work of some sort, or by bodying them forth in a sonnet, just as Goethe delivered himself from like gloomy thoughts by writing the *Sorrows of Werther*. The feeling lines really express his sense of the insignificance of the bodily life compared with that of the spirit, the better part of him, and of the easy and base means by which in a moment, in the twinkling of an eye, its poor being might be ended. Still, in

It is important always to take due account of the profitable use advisedly made of experience for the ideal effects of art, and largely to discount the fulsome extravagancies of the dedications then in vogue. Shakspeare was not the only poet who, after the abject fashion of the time, addressed adulatory verses to noble patrons and was rewarded with liberal gifts of money ; indeed, he makes it his merit that he did not, in order to compete with those who spent all their might in richly compiled sonnets and polished form of "well-refined pen," alter his style and adopt new-found methods, but kept to true plain words of his own pen ; so that every word almost told whence they proceeded, and other pens had even taken to imitate his style. Still, he was not only profoundly discontented with his situation but keenly self-reproachful for his past conduct in life. "The frailties of his sportive blood " had, he confesses, betrayed him into irregularities which had injured his reputation ; he had "gored his own thoughts," "wasted his affections," looked

his dark moods he may, like Hamlet, half wishing the end but shrinking from the means, have sometimes craved that this too solid flesh would melt, or that the Almighty had not fixed his canon against self-slaughter. A person so superiorly endowed mentally and surely conscious of his superiority, yet at the same time capable of nourishing seriously the common ambitions which he cherished as an honest citizen, could not be so detached as to be uniformly serene ; in encounter with the realities of life he might well fall at times into fits of dejection and disgust.

askance at truth," and he bitterly blamed fortune that did not provide better for his life than "public means which public manners breed." His name had received a brand and his nature been subdued to an employment and environment which sank him socially below the lofty eminence on which his genius then entitled him to stand, and has now in glory throned him. Yet, after all, he passionately resents the censorious comments of the world, defiantly declaring that it is better to be esteemed vile than to lose the just pleasure of conduct which, although esteemed vile by others, is not so to his own feeling, they counting bad what he thinks good.

No, I am that I am ; and they that level
At my abuses reckon up their own ;
I may be straight, though themselves be bevel,
By their rank thoughts my deed must not be shown.

He foresees clearly the day when the friendly communion with his patron shall end, and the latter by advised respects and reasons of settled gravity pass him strangely with scarce a greeting glance, much, in fact, as in the play of *Henry IV.* he represents Prince Hal as passing his old companion, Falstaff, without mark of recognition. Such, however, is his extravagantly professed devotion that in meekest self-abnegation he entreats him not ever to think of him if it would be a pain to remember him, not so much as mention his name lest the world should mock and shun him for his former friendship, protesting that he

on his side will bear without his help all the blots that remain from it and never say a word to tell of their old familiar converse :—

My name be buried where my body is
And live no more to shame nor you nor me.

What brand other than the disesteem, if any, of his occupation as a common player vulgar scandal stamped on Shakspeare's name it is bootless to guess, unless it were scandal or slander arising out of participation in his friend's profligate proceedings. However loose the morals of the time and place, some blame—was there no warrant for blame?—might haply light on the mature husband who, leaving his wife and children to live asunder at Stratford, wasted misplaced affection on a wanton mistress whom, though it was “a sin to love,” he “loved dearly.” Be that as it may, what is plain is that something in his situation prevented equal social intercourse with his noble patrons, and not only debarred him of “public honours and proud titles,” as he declares or deplores, but for some reason or other kept him out of such society as his poetical fellows of inferior genius enjoyed freely. His contemporary Alleyn, an eminent player, who was the munificent founder of Dulwich College, occupied a good social position, entertaining persons of rank and learning; Marlowe, his master of the “mighty line” of heroic verse, was the welcome guest of Sir Thomas Walsingham at his country house and on friendly terms with Sir Walter Raleigh. His

friend, Ben Jonson, whom he used to meet at the Mermaid Tavern and contend with in sprightly wit-combats, and whose play *Sejanus* he put on the stage, was the friend of Bacon and of many other noble and learned persons, and he himself, like Ben Jonson, had most likely listened to Bacon's grave and stately eloquence in Court, as well as read his Essays ; but there is no evidence that he was known personally to the great Chancellor, or ever in the company of persons above him in station, except when they were visitors to the theatre or the tavern. For some reason or other his social standing was not that which his rare genius might have been expected to ensure.

To all seeming his life was mostly passed between his industrious work at the theatre, his prudent investments and care of his gains, his recreations at the tavern, his intercourse with his mistress, an excursion to Dover or elsewhere, perhaps to make studies of sea and sky meeting with deafening clamour, of the ship now " boring the moon with her mainmast and anon swallowed with yest and froth," of cliffs from whose tops men moving on the beach looked like mice crawling—and the periodical visits latterly made to his native town.* There it was that so soon as he

* Not that it is in the least likely his vivid descriptions of tempests at sea were made from personal observations, even if he ever got outside Dover harbour ; the scenes of noise, tumult and confusion on board the labouring ships tossed about in furious storms, as described in *The Tempest* and in *Pericles*,

began to prosper he was intent on acquiring land and houses and holding the social position denied to him in London, and there, having solicited and obtained the grant of a coat-of-arms, he hoped to found a family.*

(3) Of his young companion's dissolute doings and their close intimacy the tender reproaches and reiterated remonstrances of the Sonnets yield ample proof. After elaborate praises of the un-

are manifestly taken from *Rabelais*. One thing he and his Elizabethan contemporaries never missed doing, namely, to take their spoil with full hands wherever they found it. On his way to Stratford he used to stay at a tavern kept by John d'Avenant, the father of Sir William Davenant, where he was exceedingly respected. "Mrs. d'Avenant was a very beautiful woman of a good wit and conversation, in which she was imitated by none of her children, but by this William." Contemporary scandal imputed the boy's paternity to Shakspeare, There is a story that one day young d'Avenant, being asked whither he was hurrying, and saying that he was going to see his godfather Shakspeare, was met with the retort, "Have a care that you don't take God's name in vain." An allusion to the scandal apparently occurs in some doggerel rhyme on Sir William Davenant, where there is a play on words *Avenant* and *Avon*.—Article, *Davenant, Sir William*, in *Dictionary of National Biography*.

* It is a probable surmise that in *The Tempest* he introduces some essence of his own experience and feeling; kept out of the supreme place to which he knew his genius entitled him, pursued by the rancour of his rivals, easily triumphing by his magic power over their plots and enmities, finally forgiving their hostility—"the rarer action" being "in virtue than in vengeance"—and taking leave of his art and them in tranquil assurance of his supremacy through the ages.

named person's singular beauty, grace and wit, grave deprecations of his licentious life as a gay and gallant libertine, repeated exhortations to marry and transmit a living copy of such precious features to posterity, so that his likeness may be kept alive and he survive in it, he seriously admonishes him that youth and beauty soon fleet, wasting fast by wear, and will in his case otherwise perish barrenly. It is true that he now makes shame lovely by his graces, gracing even disgrace, so that those who blame him excuse his frailties on the ground of youth, making a kind of praise of their dispraise, yet he ought to take heed of the certain consequences of reckless excesses—

The summer's flower is to the summer sweet,
Though to itself it only live and die ;
But if that flower with base infection meet,
The basest weed outbraves its dignity :
For sweetest things turn sourest by their deeds,
Lilies that fester smell far worse than weeds.

He warns him that although his beauty is admired by all, even by his foes, yet they, measuring the beauty of his mind by his deeds, add dispraising comments and blame. And why? Because he was too free in his loose intimacies—

The solve is this, that thou dost common grow.
Solemnly, therefore, he adjures him to think of the time to come when, crushed and o'erworn with age, his brow filled with lines and wrinkles, his beauty shall live only in the lines addressed to him ; where only it does now live.

Besides these general admonitions, a special reproach—most significant in relation to the loose kind of life the two were living—he is forced sadly to make because of a treacherous wrong done to him, quite unlooked-for and touching him to the very quick. This was nothing less than the base seduction of the mistress whom he dearly loved. In extenuation of the gross perfidy, it was true, might be pleaded the woman's seductive arts and the overpowering temptation, when a woman wooes, to succumb to the insidious flattery of her wiles and guiles.*

To promise so fairly and act so falsely was a sore-wounding offence, nor did the repentance which followed cure the hurt and disgrace of the wrong. Nevertheless, such is his extravagantly professed affection or advised devotion that although it is greater grief to bear love's wrong than hate's known injury, yet he will forgive the robbery and not quarrel with "the gentle thief"—

Lascivious grace, in whom all ill well shows,
Kill me with spite ; yet we must not be foes.

The forgiveness was not immediate ; there was a temporary breach of friendly intercourse, during

* And when a woman wooes what woman's son
Will sourly leave her until she do prevail?
Ay, me ! but yet thou might'st my seat forbear
Who lead thee in the riot, even there,
Where thou art forced to break a twofold truth,
Hers by thy beauty tempting her to thee,
Thine by thy beauty false to me.

which, suffering from the wrong done to him and the consequent estrangement, he protests that he passed "a hell of a time"; but a reconciliation into which, maybe, consideration entered as much as affection, took place and the intercourse was renewed—

And ruined love, when it is built anew,
Grows fairer than at first, far greater,
So I return rebuked to my content.

To the mistress who had betrayed him, the mature husband now showing the presaging signs of withering age, for the handsome young lover he addresses sterner reproaches, not only for torturing him but for seducing his friend, so that—

Of him, myself and thee I am forsaken.

Whoever she was, she was plainly not a common woman, but a lady of musical accomplishments and cultivated understanding, else he could not have spoken of the chips dancing under sweet fingers which "made dead wood more blest than living lips," or thought of inditing to her a series of exquisitely elaborated sonnets which she could hardly have inspired or ever have appreciated. That she was not beautiful he confesses; with her dusky complexion, her dark eyes and wiry-black hair, "a colour not of old counted fair," she was easily excelled in graces of feature and person, had not, indeed, as some said, a face to make love groan; yet to his doting heart she was the fairest and most precious jewel. It was not

through his eyes, which saw a thousand faults, that he was bewitched, it was his fond heart which doted ; therefore he refuses to believe his eyes, and knowing all the while what beauty is, sees beauty where it is not. Neither his five senses nor his five wits can dissuade his foolish heart ; like the ecstasized courser of Adonis when it broke loose at sight of the young and lusty jennet—

He sees his love and nothing else he sees,
For nothing else with his proud sight agrees.*

Such is his infatuation that he cannot help believing her oaths of fidelity, although he knows she lies, and crediting her false-speaking tongue when she flatters him that he is still young, although both she and he know that his days are past their best. Vanity in years will not own to itself that he is old and she is false—

* Of the exclusive, all-absorbing rapture produced by the ecstasy or hypnotism of the love-passion and its blunting or paralyzing effects on all sense and thought not enthralled in its workings he frequently dilates, estimating its operation and effects as perfectly as if he had possessed a physiological intuition of the cerebral structure and the consequences of its organic mechanism being thrown out of gear. His psychology is not general and barren ; it is concerned with real things and men and women in real action, not with sublime abstractions out of all touch with realities ; cannot compare, still less compete, with that of the clever mental acrobat who tries strenuously with wondrous agility metaphysically to wriggle out of his own skin and to make himself and others believe that he has succeeded.

But wherefore says she not she is unjust?
And wherefore say not I that I am old?
O, love's best habit is in seeming trust
And age in love loves not to have years told.

He is content, therefore, so she will not forsake her poor Will, that they should live in mutual deception, lying to one another, she to him in swearing that she loves him, he to her in befooling himself to believe her assurances when he is sure they are lies—

Therefore I lie with her and she with me,
And in our faults by lies we flattered be.

Herein doubtless much customary poetic exaggeration, but not therefore without any foundation in fact, seeing that such things have been and are, however sad to see : it is no strange thing for the depraved appetite to feed gladly on that which nurses the disease. *

Meanwhile he implores her not to wound him with her cunning, to forbear darting love-glances aside in his sight, not to press him too hard with her disdain by open show of preference for another, but rather to pretend that she loves him,

* If she were the lady whom conjecture has perhaps identified, her free love certainly merited what might well have been the description of her in *Love's Labour's Lost*.—

A wightly woman with a velvet brow,
With two pitch-balls stuck in her face for eyes;
Ay, and by heaven one that would do the deed
Though Argus were her eunuch and her guard.

as physicians speak of recovery to sick men near death, lest otherwise his patience give way and he speak ill of her. So overpowering is his passion, so abject his thrall, that he protests he is desperate and, being past cure, is past care. To his mind, what is worst in her exceeds the best in others, and he loves her the more the more he hears and sees just cause why he should hate her—

O, though I love what others do abhor,
With others thou should'st not abhor my state !
If thy unworthiness raised love in me,
More worthy I to be beloved of thee.

The very extravagance of enthralling passion this, were his wail to be interpreted literally, albeit the exhibition of a truth exemplified every day by the spectacle of two mutually enchanted lovers, never able to get too close to one another, however little in either to attract, or however much to repel, dispassionate onlookers wondering see. But his woeful plaint was not meant literally, it is just an instructive instance teaching how prettily he used a little experience for large reflective and artistic effects. Feeling that he sees so falsely as to worship his mistress's defects, he asks whether, after all, it is really his eye that is at fault and not rather his judgment which judges falsely what his eye sees aright, but is forced to acknowledge, as the wiser sense of the world well denotes,

Love's eye is not so true as all men's ; no,
How can it ?

Then follows the ingenious conceit to explain why that is so—

O cunning love, with tears thou keep'st me blind
Lest eyes well-seeing thy foul faults should find.

Could there be plainer proof of the skilful use made of woes for the artistic construction and embellishment of an effective sonnet? Throughout he is able composedly to analyze and reflect on his grief, to consider its psychological bearings, curiously to perceive to what poetical uses it lent itself; all the while keeping quiet possession of himself, nowise so fatuously possessed by his passion as he protests he is. With whatever illusions unreasoning admiration veil its vision, Shakspeare himself cherished no illusions concerning the deceit and guilt of his equivocal situation. He frankly confesses that he was forsworn, that his sin was sinful loving, but strenuously maintains that it was not for her to reproach him who was herself twice forsworn, had sealed false bonds of love and shamelessly robbed others' beds of their dues. A comfortable discharge of bad humour, no doubt, this dolorous recrimination, for it was the subtle trick of a soothing self-excuse; not that he, knowing the woman, could expect that she would in the least mind it; in no case can reproof by playfellow in the sinful pleasure have much moral weight; as fellowship in woe assuages woe, so fellowship in sin blunts sense of guilt.

The characteristic arts of the unfaithful mis-

tress, the tricks and shifts that lurk in her, and the foolish vanity of the doting lover, especially of him who is in the afternoon of life—his waning vigour fired with the force of feverish passion—he could depict with excellent force and truth, as also the harrowing suspicions, the torturing jealousies, the repulsive imaginings, which assail and besiege when, sure that he is betrayed, he clings in spite of proof to wilful self-deception.* Wondrous strange it is how fatuously in such case the amorous fool resents the notion of a sharer in his mistress's dearest favours, even though the lawful sharer be her own husband, perhaps by insidious questionings actually soliciting her to assert and himself to credit, when he knows she lies, that she is somehow pure and chaste; for her unchastity with him counts nobly as purity

* Provoked by his languishing appeals the lady hastily mutters "I hate—" but, checking herself on seeing his woeful look, alters the end of the intended sentence by adding "not you," and perhaps kindly bids him "Good-night."—*Sonnet*.

Good-night, good rest. Ah, neither be my share;
 She bade good-night that kept my rest away;
 And daff'd me to a cabin hanged with care
 To descant on the doubts of my decay—
 "Farewell," quote she, "and come again to-morrow."
 Farewell I could not, for I supped with sorrow.—

The Passionate Pilgrim.

Descant on his decay was no passing lament apparently :—

That time of year thou mayst in me behold
 When yellow leaves, or few, or none, do hang, &c.—*Sonnet*.

of love.* In the blind passion of young Troilus for the fair and false Cressida, and in the infatuation of mature Anthony for the licentious Cleopatra, is striking proof how well alive Shakespeare was to the tricks and guiles of the faithless mistress, the lurking dumb-discoursing devil of her each cunningly tempting grace, and the overpowering fascination with which the chasteless creature attracts and holds captive her doting victim. Is it not quite preposterous to suppose that the characters of Cressida and Cleopatra could have been drawn so effectively by one who had never learnt by personal experience what treachery in love was ; as likewise that the coarse scenes and brutal persons of the brothel into which the gentle Marina's ungentle fortune cast her for a while, could have invaded the imagination of him who had not seen anything like that which he represented dramatically ? The illuminating flash of intuition emergent from sympathy of feeling is no less necessary rightly to conceive and dramatically delineate a vicious than a virtuous person ; even the wildest vagaries of dreams and the mad fantasies of the brain-sick imagination need and use the observed forms and

* Un homme amoureux oublie à l'instant même ce qu'il sait le mieux à l'égard des femmes en général. Telle femme, eût elle trente ans et quatre enfants, il lui fera des questions insidieuses pour voir si vraiment elle n'aurait pas gardé jusqu'au hasard de sa rencontre avec lui une précieuse virginité.—

Alphonse Karr.

motions of real things, however incongruously mixed and fashioned these be.

A marvel of sublimation without substance it would verily be if these pictures of licentious love and its base treacheries were only unsubstantial excursions of sportive fancy, not the buildings of imagination on a basis of personal experience. He who believes possible or probable such real life in that which had no personal root might do well to recollect and ponder the angry words impatiently flung by Romeo at Friar Lawrence's proffered comforts of philosophy :—

Thou canst not speak of that thou dost not feel.

Of no more worth is the artist's barren skill who paints with imagination without observation than the skill of him who paints with observation without imagination ; into the art that is to live must life-blood enter. Interesting and not un-instructive in this connection it will be to recollect the scenes in the Boar's Head Tavern in Eastcheap, in which Prince Hal, Poins, Falstaff, Bardolph, Dame Quickly and the rest of the dissolute crew figure, especially the scene in which Doll Tearsheet, flattering and fooling Falstaff while sitting on his knee and kissing him, assures him that he is in excellent good condition, his pulse beating as well as heart could desire and his colour as red as any rose, and protests, in answer to his lament " I am old, I am old," that she loves him " better than she loves e'er a scurvy

young boy of them all." Instead of such coarse picture being the abstract creation of imagination uninformed by observation, it probably represented something like that which Shakspeare had observingly noted in the intercourse between his noble friend and his loose tavern-companions; their profligate doings may well have furnished the raw material of the humorous scenes in which the Prince took part with the low company frequented by him before he put off his loose behaviour.* The Blackfriars Theatre was nowise a holy shrine of innocence situate in the midst of peaceful surroundings; on the contrary, it was a nuisance to the neighbourhood and such a damage to surrounding property that when its proprietors, Burbage, Shakspeare and their partners applied for leave to enlarge and improve it, they encountered so strong an opposition on the part of the inhabitants as to oblige them to solicit the help of their powerful patrons in support of their humble petition to Lords of the Privy Council against the petition of the inhabitants that the theatre should "be shut up and closed; to the manifest and great injury of your

* See *Richard II.*, Act v., Scene iii., where the Prince's father speaks thus:—

Inquire at London, 'mongst the taverns there,
For there, they say, he daily doth frequent,
With unrestrained loose companions,
Even such, they say, as stand in narrow lanes
And beat our watch and rob our passengers.

petitioners, who have no other means to maintain their wives and families but by the exercise of their quality as they have heretofore done."

That a sane and fruitful imagination implies the food and training of real experience, wanting which an unrulèd imagination runs into wild and barren stalk, is proved by innumerable examples of poets and novelists—signally by the eminent example of Sir Walter Scott, in whose romances the most real scenes and living characters can be traced to diligently obtained information and carefully noted observations of actual places and persons, translated and more or less ideally transformed by a richly stored and well ruled imagination. To suppose that Shakspeare had no personal part either as observer or actor in the dissipations which he describes, is to suppose it only because unreasoning devotees, craving to have be that which they wish should be and counting it virtuous in such case to practise wilful self-deception, hug the opinion that a transcendent genius must have been a person of transcendent morality, although the experience of all the world proves the contrary in the general and his history exemplifies in the particular. As well believe that Burns, because he wrote the *Coltèr's Saturday Night* and *Holy Willie's Prayer*, was not a lustful drunkard, debauched no village maiden, wrote no verses unfit for publication ; that Goethe because he wrote *Faust* had no selfish love adventures, and did not in the end marry his

common mistress when she had borne a child to him, burdening himself thenceforth with a drunken wife ; that Byron was a saint who masked a pious life beneath the impious show of a dissolute Don Juanism ; that the gentle and genial Lamb was not set in the stocks once for brawling on the Sabbath day.

Such phrases as inconsistent, inconceivable, incongruous, contradictory, and their like, when used in the examination and interpretation of the qualities of a character, only betray imbecilities of analysis.* At bottom the man is always an organic unity, and the bad as essential and logical a constituent of his nature as the good ; for what strange compounds soever nature makes, and

Nature has framed strange fellows in her time,
it does not make organic disunities, contrives somehow to hold opposite polarities in unity of being. To my mind it would be the most wonderful thing in the psychological wonder which Shakspeare is, if one who had never felt it could have known "the expense of spirit in a waste of shame," and expressed with tersest force and consummate art of diction the fierce quest, the

* If it be "a great philosophical truth" that "contradictions cannot coexist," that is only to call contradictories things which we cannot conceive to coexist, because they affect us so oppositely ; whereas the truth may be that they are fundamental continuities. It might perhaps be a deeper truth to say that because they coexist in the whole they are necessarily contradictory in the individual part of it.

brief bliss, and the sequent hated woe of lust in action—

Enjoyed no sooner, but despised straight ;
Past reason hunted ; and no sooner had
Past reason-hated, as a swallowed bait,
On purpose laid to make the taker mad ;
Mad in pursuit and in possession so ;
Had, having, and in quest to have extreme,
A bliss in proof, and proved a very woe ;
Before a joy proposed behind a dream.

No one has depicted the alternating joys and pains of lustful love, its blissful now and hateful then so forcibly, with compressed energy of feeling and words, because no one, having felt them, had such power to body forth his experience, and convert tears of remorseful memory into gems of matchless art. On the other hand, no one has insisted elsewhere with more delicate feeling on the contrast between the tender grace of pure love with its refined joys and the coarse passion of bestial lust with its loathed satiety : the one as gentle as the soft lighting of a seagull on its cradling wave, the other as coarse as the plunging splash of a tame duck on to a weedy pond.

Studying the sonnets critically and candidly without preconceived notions of something mysterious or mystic which they must obscurely mean and wilful blindness to that which they plainly say—or with an indolent content to enjoy them diffusely as word-melodies without caring to discover the least meaning in them—they disclose a deep wading through dirty waters at one period

of Shakspeare's life in London, drawing their spirit and substance from what he saw, felt and thought in his pilgrimage. To the easy objection that he never could have thus exposed his private feelings to public view, the simple and easy answer is that they were only circulated privately at first, and that it is not certain they were ever intended for public perusal. It is a question, indeed, whether they were ultimately published with his open consent.* Written separately perhaps as occasional pieces, according as he conceived the central thought of each sonnet, one may well suppose that he would hardly like such masterpieces of poetic art, when perfected and collected, to be quite lost. All the more unlikely seeing that some of them had been surreptitiously printed and others might eventually have been likewise pirated.

It is nowise beyond belief—is perhaps the most likely key to them—that the special plaintive out-pour of his wrongs as a forlorn lover, basely betrayed by mistress and friend, was thus poetically vented for the perusal and amusement of the

* Such anonymous publication of that which the author did not care openly to father, though he could not bear to destroy it, was not unexampled. Edward Blount, a respectable bookseller and himself a man of letters, who was a partner in the first edition of Shakspeare, spoke of Earle's *Microcosmographie* as "so many dispersed transcripts which obliged him to play the midwife to these infants which the father would have smothered."

guilty couple as well as for his own relief ; that he was not so deeply hurt at heart but that he could entertain him and her and himself with the elaborate fretwork of poetic fancies in which, making sport of his pains, he represented things. What real feeling is there discernible in the overstrained conceits of Sonnet 42 about the unity of her and his friend with himself after their treacherous lechery, or in the unpleasing punnings on the word Will in Sonnets 135 and 136, where she, having one Will, is said to have another Will beside him and "Will to boot and Will in over-plus !" The elaborate expenditure of invention in punning on the words Will and Wills is pretty plain proof that his feelings were not so badly wounded but that he could use and enjoy a deliberate intellectual treatment of them for the purposes of art.*

Those who fondly strain admiration to idolatry, wilfully shunning the light they dislike, cannot conceive that so great a genius could ever have done so unworthy a thing as address such verses to the lecherous mistress who had discarded the ageing lover for the wanton young gallant ; their

* How easy it was for a good wit to play with words and sentences he tells us in *Twelfth Night*. *Clown* : To see this age ! A sentence is but a cheveril glove to a good wit : how quickly the wrong side may be turned outward. *Viola* : Nay, that's certain ; they that dally nicely with words may quickly make them wanton.

"cloistered virtue," untainted by a debauched atmosphere, cannot realize the low tone and vicious habit of thought and talk prevailing among persons living a licentious life and making "lascivious comments on their sport." They innocently overlook two things : first, the inevitably vitiating influence of the bad moral atmosphere emanating from the corrupt medium in which the verses were engendered and their perusal probably enjoyed—habits of thought, feeling and bearing being caught as men take diseases of one another, wherefore, as Falstaff says, "men ought to take heed of their company" ; secondly, the twofold aspect of the man—that of the poet writing divinely in his chamber as an idealist, and that of a companion, yet not compeer, living in undivine intercourse with mistress and friend and in his real person eating, drinking, and behaving much like any common mortal.

3. *Character.*

It sounds nowadays almost like sacrilege, indeed, a blaspheming of one's mental breed, to hazard the conjecture that Shakspeare possessed a deep fund of still self-love, caring much to acquire property and position in his native town, not caring to let aught else take deep hold of his feelings. Of this strong quality in his nature he at any rate seemed not to have been ignorant—

Sin of self-love possesseth all mine eye,
 And all my soul, and all my every part ;
 And for this sin there is no remedy,
 It is so grounded inward in my heart.—S. 72.

If he had not more head than heart, he certainly had a head which kept the heart well in hand, realizing, no doubt, that self-love in the end is not so vile a sin as self-forgetting. Could he have lived the life of sinful loving he lived in London, leaving his wife and children at Stratford, had he not possessed a solid basis of cool-headed egoism? What proper answer could he have made to the straight question which a friend, dealing faithfully with him, might have pertinently put?

And may it be that you have quite forgot
 A husband's office? *

If it be true that there was such a deep egoistic bottom to his character—in what great character was there ever not?—that is no matter of sensible regret to the world, which has had the inestimable profit of it and could not have had him without it. Wanting a large measure of mental aloofness from men and things incom-

* *Comedy of Errors*, Act ii., Scene ii., where Luciana explains at length how smoothly the husband who truants with his bed should counterfeit to the deceived wife, bidding him, if he likes elsewhere, to do it by stealth, to muffle his love with some show of blindness, to look sweet, speak fair, become disloyalty, bear a fair presence.—

Be secret false ; what need she be acquainted ?

patible with keen personal feeling, he could hardly have surveyed them so calmly and objectively as he did. Vices and virtues, loves and hates, follies and crimes, good and bad deeds of all sorts, human doings in all their aspects he placidly observed with impartial insight and detachment, lucidly unfolding with sympathetic imagination their complex interworkings of causes and effects, because he contemplated them as a philosopher and felt them as an artist without being much moved by them as a man.

Why scruple to think true and say of him that which all the world agrees to be true, and say of Goethe—the modern poet next in greatness—who, having pursued his love adventures at the cost of others, freed himself from all after-pangs by embodying his experiences in a poem or a romance, passing thenceforth on his serene way of systematic self-culture with an almost Olympian indifference? An excellent medicine by which a loving self-lover so cures his hurt, turning hurts to pearls, as to love the use of the hurt! This Goethe did of set purpose and with consistent execution, whereas Shakspeare's placid egoistic course was apparently pursued with even pace and benign temper, unillumined by any formulated theory of self-development. There is nothing to be said, then, but to praise egoism for it, seeing that had he been a sapless saint he would not have been Shakspeare, and mankind would have lost the priceless fruits of his depth

of insight, his extent of outlook, his world-wide multipolar assimilation, his large-reaching reflection, and the cool self-detachment and indulgent humour with which he took survey of all the world, seeing all as one and all in the one.

In the seeming contrast between the ordinary routine of his life as a man of business and pleasure and his poetic work as a man of genius, there is nothing incompatible to wonder at; examples of similar startling contrasts between the material man, plodding through his daily labours and pursuing his pleasures in the world, and the ideal man of his chamber, as he works imaginatively and others imagine him, are notable enough in the lives of other men of genius. Is there ever a great character that does not exhibit apparent inconsistencies? "The web of our life is of a mingled yarn, good and ill together," and the one as constituent a part of its structure as the other. Having his two poles of being, so to speak, he displayed a two-fold function in relation to two different orders of impression; not a dual being really, but two seeming inconsistencies whose contrary features, marking quite different functions in relation to different circumstances, we cannot duly correlate because we know nothing yet of the subconscious mental workings of the physiological being which holds them in vital unity. Is not that the full stop to which the psychologist must always come who is content to count science the little that he can

learn of his own mind, be it great or small, by introspection? And, more strange still, to think he can by such poor means sound the depths of a subconscious mind which has at last thrust itself on his unwilling notice and he would fain away with?

On the one hand, then, we have the smoothly shrewd, hard-working, thrifty, self-contained man of the world able to take excellent care of himself and not much unlike other men in daily life ;* caring so little to distinguish himself from them that he might not have astonished or entertained gladly, might indeed have vastly disappointed, the gushing interviewer ; on the other hand, the great poet and dramatist whose rare and rich faculties have given him a distinction above all men : the former with his merits and his faults, his frailties and his virtues, a subject of eager interest to the curious inquirer but of no lasting consequence, the latter a momentous event and agent in the process of human evolution, likely to be an enduring inheritance so long as nature, "sovereign mistress over wrack," continues its human progress towards a far-off end, when at last

Her audit, though delayed, answered must be.

* In 1604 he sued Philip Rogers in the Borough Court at Stratford for 35s. 10d. for corn delivered, the delivery of the corn being stated to have taken place at several times.

So much, then, for the real Shakspeare as revealed by the living language of his verse and proclaimed by the very stream of his life and the business which he helmed. He died at New Place, Stratford, on April 23rd, 1616, aged fifty-two years, having made his last will and testament on the 25th day of the previous March, the carefully considered will of a thoroughly *bon bourgeois*. The story was that Drayton, Ben Jonson and he had a merry meeting and drank too much, and that he died of a fever contracted in consequence. That he died of a fever is probable enough, but it was more likely contracted from the bad drains in which Stratford long abounded. Was it perchance with prophetic soul dimly divining the advent of the modern body-snatcher who might rifle his grave and carry off his bones to Westminster Abbey, there to lay them among bones not all worthy of such sepulchral honour, that he wrote the well-known lines placed above his tombstone.*

Good Friend, for Jesus' sake forbear,
To digg the dust enclosed here :
Blest be the man that spares these stones,
And curst be he that moves my bones.

The solemn deprecation has happily been effective, for there after life's fitful fever still lies all

* Sir Godfrey Kneller is reported to have exclaimed on his death-bed, "By God, I will not be buried in Westminster Abbey." Asked the reason why, he replied, "They do bury fools there."

that is mortally left of him who, by the grandeur of his intellectual powers, the prodigality of his imaginative creations, and the melodious splendour of their dramatic presentations, has built himself an immortal monument in the world's wondering admiration.

Secure from worldly chances and mishaps,
Here lurks no treason, here no envy swells,
Here grow no damned grudges, here are no storms,
No noise, but silence and eternal sleep.



MEDICINE :

PRESENT AND PROSPECTIVE.*

IN this address on medicine which I have the honour to deliver I do not purpose to recite a story of its victories ; that has been often done in learned and elegant discourses by orators better equipped for the work. I shall do no more than, looking at large on its present position, try to indicate in a general way how, with advances day after day, its horizon widens and its expectations of service to mankind increase. Never was the pace of medical progress so rapid as during the last fifty years, and never the labour to promote it so eager and strenuous. More victories sure to come soon will no doubt reward the zeal of those at work now and those who, coming after, shall carry onwards the torch of progress.

When all is said, however, the right of present glorification belongs rather to surgery, which, since it has painfully found out the aseptic virtue

* Address in medicine delivered at the Seventy-third Annual Meeting of the British Medical Association, held at Leicester, 1905

of thorough cleanliness, has made such notable operative progress. Day after day the surgeon invades territory which the physician deemed his own, and saves from pain and death the patient whom medical art was impotent to help. He opens the cerebral abscess, cuts out the cerebral tumour, frees the fettered lung, fixes the floating kidney, cleans out the stone-packed gall-bladder, removes the peccant appendix, yea—rudest raid of all—by cutting away large parts of the sluggish bowel, aspires to cure the obstinate constipation which drugs had failed to cure, had probably aggravated. In face of the bold rectifying operations of his art, it might seem almost a pity that Nature, in its design and construction of the human body, had not the advantage of modern surgical advice. A possible apprehension now is lest in his zeal to put quickly right that which is wrong the surgeon be sometimes tempted to supplant instead of aiding Nature in its constant efforts to put things quietly right. Medicine and surgery are not of course separate arts, but different functions of one healing art, always in need of mutual aid and instruction, and it will go ill with the patient of either physician or surgeon who ignores this truth in practice.

While proclaiming praise, I cannot but deplore the present practice of inventing and multiplying portentous words of Greek or Latin or mixed root to describe simple things. One cannot open a medical journal nowadays without being amazed

and dazed by the prolific coinage of verbal monstrosities, acrid enough sometimes to set the teeth on edge. Every cut which the surgeon makes is a magniloquent *ectomy* or *ostomy* ! No one does so simple a thing as excise a uterus ; he performs *panhysterectomy*. If he cuts into or cuts out a stomach and duodenum it is a *gastroduodenectomy*, and if he does this by a more skilful cut than heretofore it is a *gastropyloduodenectomy*. Then there is a *colpohysterectomy*, and, more mouth-filling still, a *panhysteromyomectomy*, in which, if I understand it, the *myomectomy* does not mean to cut away muscle, but to cut out a *myofibroma* in muscle ; and so on with a *dacryocystorhinectomy* to cure a purulent *dacryocystitis*, a *cholecystoduodenostomy* and similar tongue-wrenching *ectomies* or *ostomies*. Nor indeed is the physician at all behind in the race of pitiful ambition. Medical literature bristles with such terms as *eosinophilia* for a dubiously characteristic blood state of *ankylostomiasis*, *myasthenia gravis*, *pseudoparalytica*, *splenomegalic polycythæmia*, *pseudoleukæmia*, *gingivitis*, *visceroptosis*, and—latest jargon of medical culture—*poltophagic* for one who chews his food, *psomophagic* or *tachyphagic* for one who bolts it ; for such is the inventive zeal that not the disease only, but every symptom of it, is in a fair way to get its uncouth name, offensive alike to eye, ear, and mind.

Obviously, if the rate of invention goes on at its present pace, instead of mutual intelligence and

fruitful union between the specialities of medical research necessitated by scientific division of labour, there will be barren separation and Babel-like confusion of tongues. As no one can have perfect knowledge of all parts of medicine—and yet every practitioner ought to have a sound conception of the organism as one vital whole, and of the relations of its different parts and disorders to one another in it—a simplicity of nomenclature would seem not merely desirable but essential.

The coinage of words without regard to their purity or pleasantness, not to say that which could not be said in common language, not even to avoid circuitry of speech, is not unpleasing only, but a positive detriment to thought ; for it is certain that, as Bacon said, words shoot back on the understanding of the wisest and mightily entangle and pervert the judgment. Vague and slovenly words embody and perpetuate vague and slovenly ideas ; once fixed, too, they lose their ugly features by familiarity and cannot be eradicated. Then nothing is easier than to stay in the word without having a clear and distinct idea of what is beneath it. For example, the now familiar word *neurasthenia*—word of comfort to doctor's tongue and patient's ear—often suffices, without further inquiry into the half-dozen possible causes of nerve-weakness, one of which is the real cause of the trouble and ought to direct the treatment. Always, too, in case of doubt salvation can be sought in the bigger word *pseudo-*

neurasthenia, regardless quite of what meaning, if any, the word has.

Looking out on the present state and prospect of medicine, it is obvious that its future work will be mainly to prevent and stop the beginnings of disease—to take good order that it shall not come—and if it do come to prevent functional disorder from lapsing into fixed disease, which must be given over either to the surgeon's knife or to the shears of Atropos ; for to despise the little things of functional disorder is to fall by little and little into organic disease. Now, preventive medicine has two plain ends, the one of which is being pursued with signal success, the other not duly studied; the first, by all fit measures and precautions to defend it from those attacks that come from without, whether in gross form or as invisible microbes floating to and fro on earth to assault and hurt it ; the second, to obviate the predispositions to disease which lie within the body, by giving it inward strength to resist its subtle, ever-present, ever-active enemies—in fact, to teach it to die at last of old age, as every doctor ought theoretically himself to do.

The success of preventive war against disease is manifest in the decrease of such diseases as plague, typhus and typhoid fevers, small-pox, malaria, hydrophobia. Here medical art, having learnt definitely what it has to fight against, employs definite measures of defence and attack for a definite end. So it has relinquished the fearful

bleedings, purgings, vomitings and druggings once in fashion. Think for a moment on what happened when medicine blindly attacked symptoms at first sight—on the sort of treatment, for example, which a poor wretch suffering from scabies underwent before the insect of that disease was discovered. What mischievous measures, again, were employed to provoke the pouring out of “laudable pus” where no pus should be! That the practice of warring against symptoms, which are effects and signals, perhaps useful outlets, of the disease, by trying to suppress them, instead of striking at the cause and letting the symptoms alone, is now obsolete, would be too much to say; it is not long since the violent lowering of high febrile temperature by frequent doses of anti-pyrim was the fashion; and still, I fear, large use is sometimes made of opium, chloral, and their like to quench the fire of acute mania, notwithstanding that, smothered for the moment, its flame blazes more fiercely afterwards, to the prolongation of the disease and peril of the patient’s life. A lesson of human history which the history of medicine signally confirms is that error does not become truth because it is repeated thousands of times by many thousand tongues. Might not the lesson aptly be applied to the valuation of some current medical theories? I suspect that if a competent thinker, constituting himself a sort of *advocatus diaboli*, were to write a book entitled *Medical Doubts*, setting forth reasons why some

accepted truths may not after all be true, he would do a real service to medical science.

For the adoption of requisite measures to ward off disease and nip it in the bud the medical man does not get full and fair opportunities. Summoned to the bedside of one actually ill, the disease having got its hold, he sees the sick man for the first time when, being sick, he is not his true self. Ignorant therefore of the patient's constitution and habits, of his temper of body and mind, all which count for much in the prescription of sound rules and directions, he is not so qualified to counsel wisely as if, called in beforehand to advise against sickness, he possessed the necessary elements of comparison between the sound and unsound man to instruct treatment. For it is a diseased person, not an abstract disease or absurdly called morbid entity, which he has to handle ; and in most persons, I imagine, there is present the weak organ or tissue which is liable to fail in function under strain, and in the end begins to die first. To treat the same disease in the same way in all persons is to do much like the tailor who supplied all his customers with clothes made to the same measure, without taking their particular measures. If doctors give physic but seldom take it—as the old gibe is—may not that be because, knowing something of their own constitutions, and of the causes and beginnings of disease, they adopt timely measures of precaution and a system of treatment sorting with their habits and temper of body and mind ?

The second aim of preventive treatment—thrown into the background now by the eager quest of the microbe—is to obviate the predispositions or tendencies to disease which lie within the organism. For such predisposition exists, whether or not, disliking the word, we like to speak instead of a constitutional soil suiting the microbe; facts not being changed by being named differently, though men are very apt to think so. Not to speak of the want of a full and exact study of radically different types of constitution and of their respective qualities and disease-tendencies, of which little note has been taken since the abandonment of the old doctrine of temperaments, there is a strange want of any study of the effects of the interbreeding of parental disease-tendencies upon the constitution of the offspring.

Might not some good come from systematic inquiries into the production and elimination of constitutional disease-tendencies and disease-immunities by the marriage-unions of different tendencies and immunities? When a person has a disease unlike that which either parent had he may still owe it to them, variations occurring in morbid heredity just as they do physiologically. The case, of course, is not one of the breeding together of actual diseases—no metaphysical conjunction of morbid entities—but of two physical organisms tending to go wrong in their respective ways. What is the morbid outcome of the union of a phthisical and an insane diathesis?

As bad as it well can be, I should say. Or of a diabetic and a phthisical constitution? What is the constitutional disposition, if any, most likely in breeding to cancel a tendency to cancer? For eager as the search is for a cancerous microbe, one may doubt whether it has yet been tracked to its late-suspected lair in the nucleus of the cell. Having regard to the local invasions and distributions of cancer, its provocation by local irritation, its more than accidental heredity, and its quiet settlement in the system without feverish tumult, for all the world as if it felt itself no alien intruder but constitutionally at home there, it seems probable that its unruly proliferation of cells, however provoked, betrays the awakening to activity of the silent memories of protoplasmic germinal growth. How best mate the person having a native tendency to insanity so as to cancel it in the progeny, or, better still, convert it into a good evolutionary variation? For that is what happens sometimes, one child of a neuropathic family dying in a lunatic asylum, while another rises to eminence as poet, painter, orator—great man of some kind. Why and under what conditions is the epilepsy of one generation transformed into the insanity of the next generation? How is it that diabetes and insanity go along together in some families, or alternate in them through generations? When medical science can answer these and like questions it may then dictate some wise eugenic rules. Meanwhile, in

the uncertainties of things we do well to trust—and we can have no surer trust—that *vis medicatrix Naturæ* by which, health being the normal and stable, disease the accidental and passing, condition, it comes to pass with the race through generations, as with the individual in his brief life, that the organic strain constantly is to rectify deviations and bring disorder back to order ; so keeping mankind in continuance, if not progress, of being for its appointed time on earth ; for a fond optimism expects not only the progress but even the perfection of mankind before the sun goes out.

Here might arise a question whether in the marriage union of disease-tendencies a new disease is ever born. It is true that new diseases have been discovered, but in such cases it is pretty certain that the newness was in the discoveries by exacter observation, not in the diseases. A morbid species might perhaps be expected to be as stable as an organic species in the surrounding conditions of the human organism ; and although new toxin-generating microbes are discovered it does not follow that they have not always been at secret work. Still it is quite conceivable that new microbes may be formed by transformation of such mean and simple organisms in the various and changing conditions of their being, and that intermediate morbid states between the classified forms of disease, a pseudo this and a pseudo that, may reflect outwardly inward microbial trans-

formations—even, perhaps, creations—in the physico-chemical recesses of complex vital processes, where, as we know, dead matter is being continually wrought into living protoplasm. When all is said, microbes have come into being somehow at some time in the procession of the ages, since it is not lawful to suppose that the bacillus of phthisis—still less the postulated or recently discovered microbe of syphilis—was present in the Garden of Eden. Perhaps the strongest argument against the occurrence of a new disease is the limit which there is to the capacity of a definitely constructed organism to go wrong. Just, indeed, as there are physical limits to the number and variety of the movements which the body can make, and it has probably made all its possible movements before now ; so there are limits to the possible varieties of its disorders, conditioned as these are by the nature, number, form, and disposition of its structures. Haply it has now exhausted its morbid capabilities, as man has pretty well exhausted the sin-conceiving capacities of his mind and the sin-performing capacities of his body—could not, for the life of him, invent an essentially new sin or perform an essentially new vice.

In the work of fortifying the body to resist inroads of disease, the most simple means are the best, and, as Hippocrates said, it is in the use of simple means that great physicians especially differ from others. Pure air, clean and proper

food, regular and adapted exercise—these sum up the measures prescribed as proper to give inward strength and to keep it in sound and supple activity. But they are not quite all, for they leave out mind ; and as a sound body is the condition of a sound mind, so the wholesome exercise of a calm and well-disciplined mind, ready to meet all changes and chances with composure, ministers mightily to health of body. Corroding passions and unruly affections, such as anger, envy, jealousy, revenge, lusts and fears of every kind, are a hurt to body as well as mind ; so that rules of wise mental culture and exercise are an essential part of the regimen of health. When one contrasts the simplicity of the salutary rules with the usual stolid violation of them, it might seem that men were in love with disease, such pains do they take to provoke and nourish it. Knowing well that fresh air is a good thing, they go on in practice to shut it out lest a stray draught come their way ; so little care do they take to eat only what is needful that they habitually eat twice as much as is good for them ; so reckless are they of what they drink that they persistently abuse alcohol to obtain temporarily an ideal relish which the insipidity of their real life denies them ; so perfunctory is the routine of daily exercise they take in dull mechanical pacings that they rehearse their lives by rote, never bringing into full use half the possible movements of their bodies and less than half the faculties of their minds ; so

little mindful are they of the need of rest to over-worked function that, so long as sexual power lasts, they spend it recklessly in the gratification of lust, thinking no harm provided it be the exercise of licit love.

That the body is a complex reflex mechanism is now a familiar notion, strange and ignored as it was when Descartes first conceived it more than three hundred years ago, expressly setting it forth then in a series of distinct propositions, which, as Huxley said, constitute the foundation and essence of modern physiology of the nervous system. The conception, untimely born, fell into utter neglect. Even now, after so many years, but little has been learnt scientifically of the manifold bodily reflexes or sympathies—motor, sensory, secretory, and nutritional—although everybody might make the needed observations on his own person, and a full and exact knowledge could not fail to be put in excellent practice. How is it that a patch of psoriasis on one leg, although itself left untouched, is cured by curative applications to a similar patch on the other leg? Certain it is that a clear conception of the reflex mechanism of the organism as a whole, and an exact knowledge of the reflexes or sympathies of its parts, will yield much profitable use, not only through systematic and skilful employment of kneadings, rubbings, pressings, and such-like manipulations and appliances, whereby an infirm organ may be more benefited sometimes than by many, or

perhaps any, drugs, but also by regulated exercises purposely adapted to bring into wholesome action all the muscles of the body ; whereby every muscle may be made to contract and every minute vital channel kept open, and so disease prevented or stopped at its outset. How seldom, alas ! is the alert anticipatory attack made upon the beginnings of evil, physical or moral !

Moreover, as the "life of relation" (using Bichat's term) from the cradle onwards is the organic education, mental and physical, of a reflex mechanism whereby that which is consciously and laboriously learnt is expressed easily and automatically—such gradual instruction being organic construction—a constant aim ought to be to fashion it well, as well as to know how it works best and to keep it in the best working order.

After all, the recognition of the principle of the reflex mechanism of the organism, and of that which it implies medically, was not due in the end to Descartes ; the lost truth had to be brought to light again gradually and laboriously by many later physiological inquirers, who, demonstrating it by observation and experiment to the common mind, are therefore called the discoverers. For its habit is to ignore him who puts forth that which it does not know, and to laud him who succeeds in making it know. The instance may serve to teach how much labour in rediscovering forgotten truths might sometimes be saved by a knowledge of that which past great men have

thought, and how many valuable lines of inquiry their thoughts might still suggest. And not famous men only whom we praise, but many nameless toilers who, inglorious, are sunk in oblivion. As the Church, besides its special saints' days, has a festival of All Saints to commemorate its obscure worthies who have not been canonized by name, so may science owe a service of thanksgiving to its humble workers who, having no memorial, are perished as though they had never been born. Two truths we may, perhaps, take for granted : first, that a great mind cannot look at any subject within the reach and means of its observation without profiting by its superior insight to think truly about it, although the language expressing it needs to be translated into terms of modern thought ; secondly, that it is a fond fallacy to believe that a truth once thought is not lost, for many spoken truths born out of season are completely forgotten, being perhaps reconceived and apprehended long afterwards when, the general thought having risen gradually to their level, they fall on fit mental soil to grow in.

The present posture of medicine in relation to tuberculosis shows a wise recognition of the necessity of fortifying the body inwardly to resist its outward enemies. The noxious bacillus has been caught, it is true, but its capture has not been followed by the discovery either of a protective serum to immunize the body, or of an

antitoxic serum to extirpate the bacillus in it. Bacilli, like the poor, we shall doubtless always have with us ; nor can we ever hope to keep them out of the body, as surgeons once fondly hoped to do with their carbolic sprays, and food sterilizers would fain do now, notwithstanding that they may thereby destroy one half the nutritive value of the food ; that a recent observer has isolated more than a hundred different kinds of bacilli in the juices and deposits of the human mouth ; and that another observer has found in the healthy intestine a large number of organisms intermediate in character between the typical colon bacillus and the typhoid bacillus.

Here, I think, one may justly regret a want of sobriety in some medical statements on the popular platform, in consequence of which the public has jumped to the conclusion that because the bacillus has been discovered phthisis is curable, the old notion of its heredity erroneous, the objection to phthisical marriages obsolete, and the right thing to do forthwith to dot the land freely with sanatoriums and so gain an immense addition to the life-capital of the nation. But is phthisis so very curable in these special hospitals, nowise endued with any special grace, I imagine, by reason of their being called sanatoriums ? Adequate statistics are not yet available, but, thus far, the modest outcome of experience seems to be that many patients who are sent in the early stage of the disease recover, if they are sent soon enough

and kept long enough ; that most of those in a more advanced stage improve while there, frequently relapsing afterwards, and that those who are badly diseased ought not to be sent at all. Is that, after all, to say much more than might be said of sensible treatment before the erection of sanatoriums ? In the end, means must be found to mend the fit constitutional soil and breeding-ground of the bacillus, if it is to perish of inanition for want of its human food. The startling proposal that subsidiary institutions should be set up, in which those who are not cured may be taken care of for the rest of their lives, can hardly please the burdened ratepayer, who may think that a nation's chief aim ought to be to have healthy bodies and minds which can endure all changes and extremities, not such as must be protected artificially from them.

Can we, again, eliminate the predisposing influence of heredity ? Actual tubercle may not be inherited—nobody thinking clearly on what he thought ever thought that it was—but the poor constitutional soil inviting and suiting the bacillus still passes from parent to child ; and we do not get rid of the essential fact by changing the name. Do we, indeed, in the end get such a valuable addition to the life-capital of the nation ? It is easy enough, noting that some 60,000 consumptives die annually in England and Wales—I don't vouch for the figures—fancifully to rate the value of each life at an arbitrary figure, and then by

multiplication to make an appalling computation of the loss to the community ; but is the loss so real ? Might not the ultimate cost to the commonwealth be greater were these persons to go on living and breeding in it ? An addition to the nation's life-capital is all very well, but the quality of the capital counts for a good deal, and it will not count for much if it is not realizable.

What does the realization amount to in practice ? The patient who comes out of the sanatorium recovered or improved, leaving his expiring bacilli there in the ejected swarms of their fellows, must usually go back to his former work and surroundings ; he cannot adapt the world to the weakness of his nature and its ideal needs, but, like other mortals, must adapt himself to the rude world and perforce do much as they do. That is what he quite naturally does : returns to his work, his bad air, and his old ways, perhaps gets married if he is not married, and begets children who can hardly have the confidence of a good descent. Meanwhile, when he relapses, he sows bacilli broadcast, thus multiplying such life-capital to fulfil its ordained function in the universe ; that apparently being to make away with weak mortality.

However, I shall not pursue a tender subject further. Human life is so precious nowadays in all its states—phthisical, insane, criminal, inebriate, and the like—that it is the pious duty of the social organism not, as the healthy bodily

organism tries to do, to eliminate or extirpate a morbid element, but to absorb it into its system, growing sympathy being the vital principle of social growth and socialism the apparent creed of the future. The medical man, at all events, can plead his duty to his individual patient ; he is not sponsor for the nation's future ; that he leaves to those whose business it is. Still, a sceptical-minded person—he would be called a cynic—looking to the ultimate issue of such morbid absorptions, might be tempted to exclaim with the prophet, “My people love to have it so, and what will ye do in the end thereof ?”

To the clear and distinct conception of the body as a complex reflex mechanism, in which there is mutual intelligence of parts with entire community of interests, we have to add the conception of it as a vital laboratory of the most complex chemical substances and processes in the world engaged in the most condensed and subtile activities. We easily think of it as a wondrous community of innumerable cells that have undergone various differentiations to form different tissues ; but when scientific imagination goes deeper into the minute subtilties of matter a living cell seems but a gross thing. Concentrated within its little body are subtile and intense forces, continuously and quietly working, which, if let loose in large explosive display, might suffice to blow up the chemist and his whole laboratory. No wonder, then, at the increasing knowledge of

the important part which chemical activities play in vital processes. Considering closely how many different chemical actions enter into each of the various bodily functions of the body—assimilation, respiration, secretion, excretion, generation, sensation—all going on harmoniously to maintain a unity of being, yet each liable to incalculable disorders, the eternal wonder is that it holds together so long and so well as it does. In the performance of these functions not the whole organism only but every cell of it generates poisons which would be fatal if they were not got rid of. The breath of man is fatal to man ; his excretory products would poison him if he did not get away from them or them away from him ; the fatigue of an organ or tissue is not due to the using up of its energy and matter only, but also to the toxic products of waste which pass into the blood-stream and are hurtful when they are not perchance of economic use to other organs or tissues. The proteid molecule of food suffers decomposition into a dozen intermediate products before its elements are built into living tissue, and at every stage of the series there is the possibility of a pernicious vitiation. The numerous and various enzymes or ferments which work in the processes of metabolism, each producing its particular chemical change, are liable to their several toxic mischances. In its normal state the intestinal canal contains numerous poisons and possibilities of poison—mucus, albu-

minoids, alkaloids, aromatic and biliary substances. Thinking on the many risks of self-poisoning and on the exact chemical agency requisite to counteract each of them scientifically, it seems a lawful conclusion that more medical good will be done for the most part by simple and general measures to keep the body in health and strength than, according to Voltaire's witty sneer, by pouring drugs of which we know little into a body of which we know less.

Besides the subtle chemical poisons of physiological disorder, medicine has now to tackle the special toxins generated by the various hostile microbes and the far-reaching damage which they do—so far-reaching sometimes as to have no end but the end of the life which they end. The syphilitic virus, whether microbic or not, is the proclaimed cause of tabes dorsalis and general paralysis. Years after his specific infection and its supposed cure a man is attacked by the flashing pains portending a tabetic degeneration of his spinal cord, or exhibits the inflated feelings and ideas preceding the cerebral devastation of general paralysis, both diseases going down thenceforth to their fatal endings. Strange to think that one kind of microbe can be the latent cause of the variety of symptoms, having regard to their differences in different cases, the elective affinities for particular organs, and the long suspensions of activity during which it must lie dormant, only to awaken from time to time to

virulent fury. One may suppose, perhaps, that the specific virus, however generated, affects injuriously the stability of the nerve-molecule, an effect nowise apparent while the person is strong and well, but manifestly destructive when vitality of nerve-element is weakened by abuse of function or other cause. For it is with elements of tissue as with individuals: to be weak is to be miserable.*

In the discoveries of microbic toxins and their antitoxins, and of the immunising virtues of anti-toxin serums, there is a discernible promise of scientific therapeutics, when chemical agents will be used, not empirically, but with scientific precision for a definite end. An optimistic outlook all the more legitimate, seeing how the chemist in his laboratory, by substitution of atoms in molecules, now creates new substances, which, so far as we know, never existed before in Nature, and some of which have proved to be of good medical service. Thus creating, our hope is that he will on the whole turn out to be a benevolent creator by inventing more beneficent than maleficent compounds for human use; range himself, in fact, on the side of the good genius of the universe, which, it must be admitted, still much needs help.

* A surmise now is that the specific organism—the so-called *Spirochæta pallida*—is allied to the trypanosomes and is a protozoon, not a bacterium, and that there may be varieties of this protozoon.

The rapid progress of chemical research, steadily sapping the barrier between organic and inorganic Nature, has now reached the very confines of life, even forecasting an ultimate analysis of those subtle physico-chemical processes whose mysterious unity of action in the organic molecule we provisionally call vital force. Six years ago a President of the Chemical Section of the British Association affirmed that, no matter how successful the reduction of vital to physico-chemical activities, a residuum would always evade such explanation and require an intelligent directive agency ; but the latest researches of *stereochemistry* into enantiomorphous substances, seem to show that the enantiomorphous agency working in the dead universe may dispense with the need of the metaphysical assumption. However that be, certain it is that day after day, with every step forward in physics and chemistry, proofs accumulate that all vital processes rest at bottom on physical and chemical processes of the same kind—although raised to a higher power—as those which take place out of the living body.

Deep as the chemist penetrates into the subtilities of matter, there is a yet deeper order of inquiry into the mysteries of the infinitely little and its most potent forces. The discovery of radial rays, perpetually thrown off in radio-active dissociation with an energy greater than that liberated in the most violent chemical decompositions, has taught us that the atom is not a simple

thing, but a spot of positive electrification within which swarms of negative electrons whirl their mazy rounds with inconceivable rapidity. Thus the chemical elements, each with its individual properties, originate in differences of the number of electrons and the figures which these take as they whirl, and all matter is resolved at last into moving electric charges—material nature simplified into electricity and ether. Remote as such speculation appears to be from the realities of life, the story of applied science furnishes many striking instances of theories so abstract as to seem of no conceivable use, which have, nevertheless, in ways quite unexpected, effected extraordinarily useful revolutions in practice; and it is not therefore unlikely that full and exact knowledge of radial energy and of its mode of action on the vital processes may instruct and guide to yet undreamed success the radial treatment of disease, some fruits of which have already been empirically gathered.

Here, then, thought again reaches a point where the domains of the living and the non-living are no longer separated by a chasm; where, indeed, one might think (if one did not suffer thought to be governed by words) that the domains of matter and life, even of life and spirit, meet, the material being sublimed into the vital and the vital into the spiritual. That all divisions of science shall gradually be effaced, even that which metaphysics has fixed between bodily and mental life, the

partitions being received as conveniences of thought, not as sections and separations of substance, is inevitable, if all Nature be one process of orderly evolution and the function of science be to find it out.

The absolute barrier between mind and body set up by metaphysics has in truth been a great hindrance to the progress of positive science. That mind works upon body to alter the rate and quality of its functions, and, conversely, body upon mind to affect its moods and thoughts, is a truism, but a truism the full truth of which is not realized because of the habit of setting mind and body over against one another as separate and independent entities. Between material energy and consciousness there is a gulf, it is true, just as there is between one mode of perception and another and between one mode of physical force and another ; but it is not possible in biology to set up a partition between mind and body. Mind works in every function of the body ; a sound body is the foundation of a sound mind ; and the lunatic is lunatic to his finger-ends. Moreover, they surely disclose one another, although by more subtile writing than we can yet read. It is not by the medium of words only that thoughts and feelings are expressed. They are expressed by other motions that are sufficiently distinct to be perceptible by sense—by subtile motions of look, gesture, gait, attitude, and the like ; the differences of which in different persons

are characteristic exponents of natural differences of thought, feeling, and action. Mind does not merely affect the body, it permeates its constitution and is delineate in the map of it. On the other hand, there is not a function of any organ of the body which does not enter into the constitution of mind; the reproductive glandular function notably revolutionizes its thoughts and feelings during adolescence; the defective thyroid maims and lames it; an atom or two going astray in metabolism precipitates it from the height of joyous vigour to the depths of impotent despair. No purposive movement could ever be made but as the outward discharge of mind incorporate in fit structure; for the cleverest man in the world could not button a button, even stir a step, had he not learnt the art by repeated practise—had not, in fact, patiently organized intelligence in proportional, that is *ratio*-nal, structure which thereafter discharges itself automatically. When the intelligent act, once learnt and fixed, is done unconsciously exactly as it is done consciously, it is absurd to say that there is mind in the one act and not in the other. The organic process is simply one of doing consciously in the individual lifetime that which has been done gradually in the formation of animal and human instincts by evolutionary adaptation through the ages. In both cases the result is structurally consolidated reason, mind statical.

The intimate and essential unity of mind and

body is, of course, pathological as well as physiological. When the paralysed patient's power to speak or walk is restored by a strong impression made upon mind at a miracle-working shrine, or by the suggestion of a skilled hypnotist, there takes place a physical excitation of the suspended function of the nervous tract or area in which the belief and will to act were implicitly organized. For the seeming miracle to come off there must, naturally, be mutual sympathy and belief in its success ; an interposed screen of doubt or disbelief prevents the excitation or inspiration of the requisite faith. To ascribe the result to imagination is one sort of provisional explanation. Certainly, as imagination may kill, so also it may cure. But that, after all, is to explain nothing—is to do little more than to make a faculty of a word.

What is the nature of the subtile transfer of energy between the active and the recipient mind whereby the former excites the latent belief and energy in the latter ? Without subscribing to the strange stories of telepathy, of the solemn apparition of a person somewhere at the moment of his death a thousand miles away, of the unquiet ghost haunting the scenes of its bygone hopes and endeavours, one may ask whether two brains cannot be so tuned in sympathy as to transmit and receive a subtile transfusion of mind without mediation of sense. Considering what is implied by the human brain with its countless millions of

cells, its complexities of minute structure, its innumerable chemical compositions, and the condensed forces in its microscopic and ultra-microscopic elements—the whole a sort of microcosm of cosmic forces to which no conceivable compound of electric batteries is comparable ; considering, again, that from an electric station waves of energy radiate through the viewless air to be caught up by a fit receiver a thousand miles distant ; it is not inconceivable that the human brain may send off still more subtle waves to be accepted and interpreted by the fitly tuned receiving brain. Is it, after all, mere fancy that a mental atmosphere or effluence emanates from one person to affect another, either soothing sympathetically or irritating antipathetically ? Think in this relation on the extraordinary (so-called) magnetic personalities which some persons possess, and, again, on the contagious fire of emotion which spreads swiftly and gathers volume in a crowd of people, inflaming them, as the case may be, either to deeds of mad fury or to corybantic displays of religious fervour.

Now, as fuller and exacter knowledge of the reflex mechanism of the body adds to our means of preventing and curing its disorders, and increasing chemical knowledge points to scientific therapeutics, so may a just conception of the subtilties of the forces at work in mental action inspire a more advised and methodical use of the resources of mind to cure diseases of body. Is

it not from neglect to employ such intelligent measures that patients fall into the hands of nature-curers, Christian scientists, mesmerists, and the like faith-instilling persons, and are sometimes cured when drugs have failed? And is it not to the use of such means, albeit not consciously formulated, that the popular practitioner, whose small medical knowledge is 'the smallest part of his skill, gains the co-operative belief of his patient and owes his fashionable success? It is all very well to say that people are ignorant, foolish, credulous. Of course they are. The world would not have gone the way it has gone were the immense majority not gladly beguiled ; but if you would influence the fool for his good, you must enter by sympathetic imagination into the fool's mind and discern the motives by which it can best be moved. And it is still the fact that, as Cicero said of places in his time, every place swarms with fools. Sick persons, even when not foolish, are notably sick in mind and mostly need a mental tonic to stimulate their weakened vitality ; such inspiration serving sometimes to animate the tissues to a strength of vital resistance from which the noxious bacillus retreats baffled—yes, even though it is greedy there and scents the fit soil, it does not find the fit climate. Few drugs are more helpful than hope, more deadly than despair.

If the procession of Nature be an orderly evolution of things up to the mental organization

of man, itself slowly perfected through the ages and still perfecting, and the growth of man's understanding and power takes place through growing knowledge and observance of its laws—being a growth of Nature through him, a part of it—medical science will obviously play a large part in the future improvement of the race. In his desire to found a science of *Eugenics* by discovery of the laws of good breeding in families, Mr. Galton would have well-constituted persons chosen to mate with well-constituted persons, looking forward to the establishment of a suitable authority to grant certificates of good health of mind and body to those who propose to marry, so that eventually a superior human stock may gradually be produced. Inasmuch, however, as the inferior persons would go on breeding after their kind, the result might be two species of human beings; a result clean contrary to the philanthropic principles of a democratic age, which aspires to embrace the lowest specimen of the race as a man and a brother—in heaven ultimately, at all events, although not for the present on earth. The problem of human breeding, however, is far from so simple as that of the lower animals, both as regards the forces concerned and the nature of the desired product. Man is a very complex organic mechanism, framed to function, not like horse or dog in certain set ways, but in adaptive thoughts and feelings, these being the superior essence of him; and it nowise

follows that an otherwise perfect physical constitution goes along with a perfect mental constitution, or that you may not breed a mind of extraordinary quality from a poor and lame body. The owner of racehorses, basing his trust on a law of heredity, no doubt does wisely to give a thousand guineas for a yearling colt of a distinguished sire, when he would not give a thousand shillings for the offspring of a poor sire ; but it would hardly be wise to buy the offspring of a human genius at a like proportionate cost. In the human organism, with its varieties of changing moods and passions, there are delicate influences, affecting gravely the processes of reproduction, which invalidate conclusions drawn from observation of the comparatively simple organic machines which animals are ; for these subtle-potent forces of mind probably constitute a medium which acts powerfully on the formative processes of the delicate germ ; not otherwise than as, on a lower and coarser level, slight experimental changes in the physical medium are now experimentally shown to affect strangely the development of the germs of sea-urchins, caterpillars, and the like.

Complex and uncertain as the matter is in the human case, it is nevertheless certain that there are laws of mental breeding yet to be discovered, and it is no more unlawful to inquire scientifically into the nature of vice and sin than into the nature and actions of poisons. Hatred is as

natural as hunger, and stands in no less need of scientific explanation. That moral qualities are not dependent upon physical constitution, have no physical connexion whatever, is an opinion which, although fostered in the supposed interests of morality, is really a hindrance to the growth of practical morality. If one thing is certain it is that all wrong-doing, whether error, vice or sin, is avenged on earth ; not always, it is true, on the individual wrong-doer, but somehow, somewhere, on others bound together with him vitally in the social system. Could men be taught to know and knowingly feel this simple truth they might be more heedful of their thoughts, feelings, and actions than they are apt to be while they ignore the stern law of vicarious punishment on earth and relegate the recompense of their doings to another life. Even for his own sake the evil doer might pause in his course if he bethought himself that the habit of a life is the organic fashioning of a character, and that a persistent system of bad feeling and conduct means a steady deterioration of character—means, in fact, the physiological undoing in the mental organization of the fine filaments of thought and moral feeling, the delicate nervous tracery, which have been the gain of human progress through the ages, and, being the latest and finest organized, are the first lost in every form of mental degeneracy.

A sobering thought, too, it might be that the mischief does not end with the individual life.

From that which is evil what good can come ? In the moral as in the physical world, the present is the natural product of the past and the determinant of the future. Moral deterioration in the parent is pretty sure to be visited somehow upon the mental constitution of the children and the children's children ; for grapes do not grow on thorns in the moral any more than in the vegetable world ; and it is, I believe, the moral or affective, not the intellectual, nature—the *tone* of feeling infused into the forming germ—which counts most in human heredity. If that be a lesson which medical research will some day demonstrate scientifically, one can heartily endorse the saying of Descartes, who was well versed in the physiology of his time and was himself a diligent dissector, that if mankind is to be perfected, the means of perfecting it must be sought in the medical sciences. For my part I cannot doubt that a positive science of human nature, as it gradually emerges into form, will make it ever more and more plain that, by operation of natural law in the process of organic evolution, sound thought, good moral feeling, and devotion to a high ideal, are the solid foundation of health and wealth of mind in individuals, in families, and through families in nations ; that there was, indeed, a measure of scientific truth in the saying of the Hebrew seer, who, looking on the generations of old, declared that those who sow upon the furrows of unrighteousness shall reap them sevenfold.

Note to Page 206.

Since the foregoing pages were sent to press the Local Government Board has issued a valuable report on Sanatoria for Consumption, containing the results of a painstaking and exhaustive enquiry by Dr. Bulstrode, which soberly corrects the extravagant statements freely made on popular platforms (summarised in *The Times* of January 25th). He shows that the magnitude of the evil has been grossly overrated, and that, instead of consumption being a cause of increased mortality, its mortality has for many years been steadily declining. In the year 1838 the number of deaths due to it in England and Wales was 59,023 ; in 1906 the number was 39,746 : a mortality of 11·5 per thousand persons as against a mortality of 39·9. In fact, the mortality has been steadily falling from 30 in 10,000 in 1855 to 25 in 1865, to 18 in 1885, to 14 in 1895, and to 11·5 in 1905. If the decrease goes on at a similar rate for the next thirty years, the disease may evidently disappear. Equally reckless and ill-grounded statements have been made as to the danger of inhalation of tuberculous bacilli by the respiratory organs, and as to the immense and indubitable good which the establishment of sanatoria all over the country would do. So far there is no real evidence that these sanatoria have produced any perceptible effect upon the rate of decline of mortality from consumption ; and their own records, poor and inadequate as are the data they supply, when carefully examined, seem to indicate that in a large proportion of the cases received

they have done little more than postpone the fatal end. Their value might, indeed, be educationally useful were there the least hope of teaching the average British Philistine, who travels daily to business in a well-filled railway compartment with both windows carefully closed, that he breathes out poisonous gas and that fresh air, even when it feels fresh, is salutary, and will not give him a cold and seduce him to his bed under doctor's orders. Certainly the public will always do wisely to receive with caution, if not distrust, medical theories hastily promulgated on popular platforms, especially when they are calculated to excite vulgar astonishment, and to furnish sensational "copy" for enterprising newspaper reporters in an advertising age.



